THE MONTHLY JOURNAL

OF

MEDICINE.

Vol. IV. AUGUST, 1824. No. II.

On Phrenitis, or Inflammation of the Brain in Children. By Edward Thomas Bond, Esq. M. R. C. S.

(From the London Medical Repository.)

Although medical men are, for the most part, well acquainted with the symptoms of the disease which is usually termed hyprocephalus acutus, yet I think it no uncommon error to consider them with too general a reference to that effusion of serum from which the complaint has derived its name. It is unnecessary to dilate on the impropriety of distinguishing a train of symptoms by a term which is obviously characteristic of a condition wholly dissimilar from the one in which they really originate, or I might expose the mischievous consequences of applying a name which signifies the presence of water to symptoms which are essentially the products of inflammation. With the well informed Practitioner, whose judgment is beyond the control of any such baptismal inaccuracy, the misnomer will be productive of no practical error; but that it may occasionally mislead, I can assert from my own experience, having known the whole treatment of the disease, from its very commencement, and while its symptoms were yet purely those of inflammation, confided to the continued introduction of mercury, in the vain hope of producing the absorption of "water," which had no existence but in the mistaken imagination of the prescriber. In however general use this inaccuracy of denomination, it must, neverthe-

less, be acknowledged, that it does not obtain without an exception, and that there are not wanting authors who, instead of the "early symptoms," or "first, second, and third stages of hydrocephalus," have adopted a nomenclature far more just and satisfactory, because more natural, and in strict correspondence with the actions in progress. If it be allowed, therefore (as who will not allow it,) that it is more correct to employ a name which does, rather than a name which does not, present an accurate idea of the condition to which it refers, it will surely be conceded to describe, with Dr. Clarke, by the term phrenitis or inflammation of the brain, the complaint usually spoken of as the second stage of hydrocephalus, and to reserve the latter term for the period when water is actually effused, and a new disease thus set up, requiring a different treatment.

It is not my intention to write any thing so superfluous as a general essay upon this disease would now be, when such excellent dissertations upon the subject are already before the public; but it may not, I think, be unuseful to press upon the attention of the Practitioner the frequency with which the complaint under consideration is excited during the period of dentition. In my own experience, it occurs at this, in comparison with all other periods, in the proportion of five or six to one. Nor is this surprising; for if we consider the highly susceptible state in which both the vascular and nervous systems of the child commonly find themselves at such a time, we cannot but remark how they are prepared to start into diseased action on the stimulus of any active irritation. I have observed the disease most frequently during the cutting of the molar teeth, less often during the cutting of the cuspidati, and I do not at this moment recollect any instance in which it appeared to be at all connected with that of the incisors. The best writers upon this complaint speak of it as one that is highly dangerous, and perhaps generally fatal.—That it warrants extreme apprehension, it would be folly to deny; but if it may be allowed one of less extensive opportunities to venture a more favourable opinion, I should say decidedly, that it is not, if it meet with early and proper attention, more hazardous than some other phlegmasiæ, which would equally proceed to a melancholy close, if exposed to neglect or maltreatment, but of which, perhaps, because they have long been "familiar in our mouths as household words," we are accustomed to speak with greater confidence. It is now about two years since my attention was particularly attracted to the subject, by witnessing the *post mortem* examination of a child who had died of the disease. Since that period the complaint has fallen frequently under my care, and the cases have all been successful.

with the exception of one, which has terminated fatally within the last fortnight. This patient was the spoiled child of indulgent parents, and, in consequence, so excessively unmanageable, that it was utterly impossible to detract blood, except at the expense of a coercion, which their mistaken tenderness would not permit. In the compendious work of Dr. Golis, of Vienna, it is stated to be the opinion of Professor Odier, that the disease is never fatal in what he denominates its second stage, that is, while the symptoms are yet those of inflammation; but this is contradicted by the two cases to which I have alluded, in which the appearances upon dissection were such as result from severe inflammatory action only. I shall proceed to detail more particularly those which were observed in the more recent of the two; premising that an intensity of inflammatory action was marked for a day and a half, or two days, before death, by so considerable a tumefaction of the whole integuments of the head and face, as to alter entirely the countenance of the child, and effectually prevent her from opening the eyes. While occupied in making the incision from ear to ear, and in turning back the swollen integuments from the cranium, there issued from the divided surfaces a considerable quantity of turbid fluid. The pericranium, particularly where attached over the left hemisphere of the skull, adhered but very loosely to the bone, and its under surface exhibited a beautiful vascular network of minute vessels carrying red blood. On removing the skull-cap, and turning aside the dura mater, the veins which open into the longitudinal sinus were observed gorged with black blood. The pia mater and tunica arachnoides were thickened, dusky, and opaque, from a deposition of coagulable lymph, and adhered firmly to the included brain. On cutting through the substance of the brain, the divided surfaces were studded with innumerable red dots exuding blood, marking the points of division of vessels which had ramified thus extensively through the cerebral mass. There were scarcely more than two tea-spoonfuls of water in each lateral ventricle. The plexus choroides presented evident traces of high inflammation.

The symptoms indicative of inflammation of the brain are occasionally preceded by a slight convulsion. If it be not repeated, and the child be not otherwise very visibly indisposed, the circumstance will at the time, perhaps, excite no particular alarm. But at the expiration of twenty-four hours, or earlier, we find the patients restless and peevish, the pulse frequent and quick, the skin hot and dry, the tongue furred, the lips dry, the bowels generally constipated, and the evacuations, when procured, usually green.—There is also a peculiar uneasy expression about

the eyes, which they who have once seen will readily recognise. If the complaints proceed, the skin becomes more hot; it appears also to be more than naturally irritable, and the patient will evince peevishness and displeasure on being touched. There is great sensitiveness to light and sound. The most trivial noise will occasion a start. The light is peculiarly unpleasant, and the eyelids are kept closed, unless the head be shaded. There is great irritability in the pupil. It contracts strongly on the approach of light, and on its removal does not dilate to a healthy diameter; but I have not observed a permanent contraction to so small a point as that noticed by Dr. Clarke, who says that it will remain permanently in such a state of contraction as scarcely to admit the point of a pin. The remark of this author that the eyes are commonly suffused, and the conjunctiva red, does not correspond with my own experience, as I have been accustomed to observe them of a deep dull and heavy white, not at all approaching to suffusion, although equally different from the expression of health. This discrepancy, however, possibly arises from the cases which have fallen under my observation not having happened to proceed to so serious an extent of inflammation as those noticed by Dr. Clarke; and it is very probable, if in the two days preceding her death I could have examined the eyes of the patient whose dissection I have described, that I should have found them in the state which authority so highly respectable gives us reason to anticipate. There is frequent screaming, tossing of the hands, applying them suddenly to the head, and as suddenly removing them. The legs are hastily drawn up and as hastily replaced, there is frequent change of posture, moving of the head from side to side, and unwillingness to have it raised from the pillow. The stools continue green, and are frequently of a clayey consistence. If the disorder proceed, the tongue will become brown, the lips more parched, and the restlessness more distressing. In short, the child will die, either with or without convulsions, or the complaint will relieve itself by an effusion of serum into the ventricles, thus constituting a new disease, characterised by a different train of symptoms—the true hydrocephalus. Of this latter affection, however, it is not "my hint to speak."

We know how great is the excitement in irritable habits during the process of teething, and that nervous irritation will seldom exist long without inducing a correspondent vascular action and determination of blood. We are authorised, therefore, in considering inflammation of the brain to be frequently dependent upon the stimulus of dentition; and if this be true, it will result that we cannot hope to subdue the disease thus originating,

without anxious attention to remove its exciting cause. If a patient, then, with such symptoms as I have enumerated among the early signs of phrenitis, have not completed his temporary teeth, we shall seldom, on examining the gums, be disappointed in our expectation of finding them swollen, inflamed, and with the included teeth evidently in progress towards the surface.—The gums must be thoroughly and freely lanced, taking care that the instrument rub strongly upon the crown of the tooth, so as to insure the complete division of the tense superincumbent membrane. The relief afforded by this simple operation is generally very striking; and it will be necessary to repeat it at intervals of forty-eight or even twenty-four hours, if the state of the gums appears to require it. Two, three, or four leeches, in proportion to the age of the child, should be applied behind each ear, or along the under surface of each lower jaw, and afterwards a small blister should be applied behind each ear. The bowels should be *kept* very freely open with sufficient doses of sulph. magnesiæ, repeated every few hours, in combination with nitre, in substance, and antimony, or ipecacuanha, to relieve, if possible, the hot and dry skin. With these, I generally unite two or three grains of the hydrarg. c. creta, with the view of correcting the disordered functions of the primæ viæ, which, although probably originating in cerebral disturbance, would, of course, react upon their cause. If the symptoms be not materially relieved in twelve or twenty-four hours, more active measures will be necessary, and the cure will depend very principally upon the copious abstraction of blood, which must be taken away very freely, according to the age and strength of the patient, either by leeches, cupping, or from the jugular vein. Under urgent symptoms, the last will be the most efficient practice. In addition to the above measures, I know of no more effectual agent in controlling vascular action, and particularly that of the extreme vessels, in which, perhaps, inflammation chiefly resides, than the keeping up of constant nausea, without actual vomiting.—The head should be kept constantly cool by means of cloths dipped in vinegar and water. A large blister, or a succession of blisters, should be applied to the nape of the neck, and the interval between their vesication and healing may be occupied by the application of smaller ones behind the ears. The free communication between the brain and the cranial integuments renders the propriety of using large blisters to the scalp at least doubtful; and in their application to the extremities, as proposed by Dr. Clarke, I have no faith, and cannot speak of it from my own experience. The bowels should be kept constantly loose through the whole disease, and with such medicines as

produce watery evacuations ; and the state of the gums should never be forgotten. I think I am not wrong in believing that, by a proper vigilance in such practice, the disease may generally be subdued. A less irritable condition of the pupil, with diminished acuteness in the senses of touch and hearing, will be among the earliest improvements. But it is right to add, that long after the child is convalescent there remain a fretfulness and pervigilium, upon which it is important that we look with a careful eye.

We may, perhaps, seek in vain for a more striking illustration of the progress of medical science than is afforded by the disease before us. It gratifies, while it amuses, to contrast the dissertation of Dr. Underwood respecting it with the more recent treatise of Dr. Clarke ; between which we may observe such difference as might be expected between a writer who is evidently feeling his way in the dark, and an author whose steps are arrested by no doubt, because the light of knowledge has broken in upon his path.

II.

Essay on the Effects of Iodine on the Human Constitution : with Practical Observations on its Use in the Cure of Bronchocele, Scrophula, and the Tuberculous Diseases of the Chest and Abdomen. By W. GAIRDNER. M. D.

(From the London Medical and Physical Journal.)

We lately took an opportunity to direct the attention of our readers to the principal facts, which had then been made public, relative to the medicinal agencies of iodine. We had occasion to regret the imperfect nature of our former account, and therefore embrace with satisfaction the means presented to us, by the work at the head of this article, of rendering our history of this powerful drug somewhat more complete. We take the liberty tostate, in commencing, that we have (in conformity with a general custom of ours) *read* the book we purpose to review,—and read it, too, with the gratification which always accompanies the attainment of an object. We have heard of iodine being given, —nay, we have even prescribed it ourselves ; but, in the former case, the accounts were vague and contradictory, and, in the latter, the practice was timid ; and perhaps on that account, unavailing ; for we confess that we were able to gather, from the histories of cases published, neither what indications the medicine was calculated to fulfil,—what good was to be hoped from

it, nor what evil to be dreaded. Such was the uncomfortable state in which we sat down to peruse Dr. Gairdner's essay; and we rose from it with the conviction that he had brought together, in a concise and well-digested form, all we were anxious to be informed of, and which we had looked for, in vain, in the various continental publications on this subject. Probably some of our readers may be similarly circumstanced; and, if so, we can refer them with confidence to the work before us; or, failing that, we solicit their attention to the following analysis, in which it may be anticipated, from what is above mentioned, that we shall deal largely in quotation, and but sparingly in comment.

Certain maritime productions, as the *fucus vesiculosus* and sponge, have long enjoyed some repute in the cure of goitre, although they have been regarded, by the majority of practitioners, as extremely uncertain, if not altogether inert. We suspect that this unfavourable opinion of the remedy, as generally obtained, is but too well founded; and the following remarks, introduced by the author as a note, will perhaps serve to explain the causes of its failure:

"The total inefficacy of this medicine in the hands of British practitioners, while its virtues are so palpable and evident at Geneva, that not only physicians, but also the inhabitants in general, are convinced of their reality, had always surprised me. I was at a loss to account for testimony so contradictory. It seemed as if medicine were a science so uncertain and futile, that its plainest facts depend more on the authority of name than on the substantial evidence of observation and experiment. I lately obtained an explanation of this difficulty, from a quarter in which I can place implicit reliance. It seems that the chemists are much in the habit of substituting charcoal for burnt sponge; of which, an undeniable proof is the fact that burnt sponge is sold at an inferior rate to the same article before it has undergone the process of combustion.—I may also be allowed to state in this place, that I have sent prescriptions for the hydriodate of potass to several chemists in London; that my prescriptions were said to have been made up; but that, a few days afterwards, when I called at their shops in order to examine medicine, I discovered that they were not even aware of the existence of such a drug. If such frauds continue to be committed with impunity, the sick had better submit patiently to their pains, than have recourse to physicians, whose science is rendered unavailing for the profit of tradesmen."

It appears, however, that Dr. Coindet had been led, not merely to form a favourable opinion of the powers of the fucus and

sponge in the treatment of goitre, but likewise to suspect that iodine might be the active ingredient common to both.

The successful result of his experiments gave rise to a certain degree of enthusiasm in a country where goitre constitutes so prevalent a deformity. This is the most unfortunate circumstance that can possibly be connected with the reputation of a new and powerful drug, and, as might naturally be expected, quickly led to its abuse, and to much mischief consequent thereupon. Many lost their lives, and many more suffered in health from its use, until at length the government, in order to check the growing evil, prohibited its sale, unless sanctioned by the signature of a regular physician.

It is justly observed by Dr. Gairdner, that nothing can tend more to assist us in forming an accurate estimate of its virtues, than a careful observation of the bad effects which flowed from its abuse. Some of the most remarkable of these we shall now proceed to give, in the words of the author.

"Some time after the introduction of iodine into practice, a few cases of severe spasmodic affection of the stomach and bowels occurred. They were attended with violent and incessant vomiting, excruciating pain of stomach and bowels, strong spasms of the back and legs. The tongue was commonly furred, and the bowels sometimes violently purged, at other times obstinately constipated. The pulse was generally extremely frequent, small, and depressed; the eyes sunk and hollow; the countenance ghastly and pale. These accidents were usually imputed by the patients to the iodine they had taken. The physicians, by whose advice the medicine had been given, would not allow this origin of the disease, till a repetition of similar cases determined that the sufferers were right. The vomiting, pain of the bowels, and the cramps of the legs, are extremely severe. They are also with the greatest difficulty allayed, continuing sometimes for many days, and renewed during weeks, and even months, after taking food. The legs sometimes swell in the first instance, and afterwards become rapidly thin and meagre. There is another symptom, which, though common to almost all diseases, is peculiarly the sign of this. The emaciation which attends this irregular action of iodine is so rapid and so extreme, as to strike terror into the minds both of patients and physicians. A magistrate of Geneva, high in office, robust, corpulent, and of an athletic form, was so much reduced in flesh, that he was not known by his oldest acquaintances. I have seen emaciation, in one case, proceed to such an extent in a short time as is almost incredible. A young English lady, at a boarding-school at Paris, had for some time been afflicted with goitre.

Her brother was prosecuting the study of medicine there.—With the characteristic zeal of a young man, as soon as he heard of the wonderful effects of iodine, he determined on making trial of its powers on his sister. He did not find much difficulty in persuading her to become the subject of his experiments; nor did he encounter more difficulty on the part of the French gouvernante, to whose care she was confided. The remedy succeeded, as usual, in greatly diminishing the tumor, and for some time no bad effects were apparent. A small hard knot only remained in the situation which had been occupied by a considerable swelling before; and the desire to get rid of this little tumor was the cause of the remedy having been pushed too far. Its deleterious effects first showed themselves by gnawing pain at the upper part of the stomach, great anxiety, and oppression. These symptoms were disregarded, and the remedy was persevered in for a week longer, during which time the patient became very much emaciated; she was frequently affected with vomiting, the pain of the abdomen became more frequent and more severe, and the thirst was very distressing. I was sent for early in the morning, in consequence of an alarming diarrhœa, which had come on during the night; and I found her in a deplorable condition, indeed. Her brother, and the mistress of the boarding-school, were so alarmed at the consequences of their conduct, that they were quite unfit to give any advice about her treatment; they could hardly, indeed, give me a coherent account of what had passed; and the poor young lady was therefore entrusted to the care of servants. She was then suffering the most excruciating pain at the stomach, violent cramps, and convulsive action of the muscles of the arms, back, and legs, from which she had scarcely any intermission. The vomiting and purging were almost incessant. The dejections were bloody, slimy, and very scanty, but at first had been copious and feculent. The matter vomited was of a dark-green colour, streaked with blood. The tongue was loaded with a thick crust, resembling in colour the matter vomited. The countenance was pale, contracted, and with that peculiar expression which announces abdominal suffering. The pulse was small, hard, and frequent,—scarcely, indeed, to be numbered. The whole appearance of the patient was such as to excite well-grounded fears for her life. Being quite unable to swallow, four grains of opium were directed to be thrown into the rectum; they were not, however, long retained, and were not productive of benefit. An anodyne embrocation was therefore applied to the pit of the stomach; fomentations to the feet; and, as soon as it could be got ready, she was placed in a warm bath. This so much quieted the irri-

tation of the stomach, that she was enabled to swallow about thirty drops of laudanum, from which there was a decided alleviation of her sufferings for nearly an hour. During ten days she remained in a very doubtful state, subject to frequent severe attacks of diarrhœa, with intense pain of the bowels. Her emaciation during this time was most extraordinary. The expression of her French nurse, '*decharnee*,' was literally applicable to her. Her arms and body were almost fleshless ; her breasts, which had been large, were now perfectly flat ; the calves of her legs had quite disappeared ; and her thighs were not much thicker than her wrists, when in health. I never witnessed any thing like such an extenuation in so short a space of time. By the steady and very liberal use of opium, she recovered to a certain degree ; but, when I last saw her, many months after her illness, she remained subject to frequent violent spasms of the stomach, during which opium alone gave her relief. Her nervous system had been much shattered. She repeatedly declared to me that she seldom enjoyed an hour's respite from the most wretched depression of spirits, and, since her illness, had never felt any thing like her former buoyancy of mind. The few moments of ease she knew were purchased by large doses of laudanum, to the habitual use of which her sufferings had forced her. She was still very pale, and her emaciation, though much less, was yet very great. She was, indeed, a miserable monument of the effect of iodine. I heard of this young lady a few weeks ago : she was then much better, had in a great degree recovered her looks, and was able to leave off the use of opium almost entirely. Her stomach, however, still remained very weak, and obliged her to be very careful of her diet. The bronchocele had not returned ; but the small hard swelling mentioned above remained still very sensible to the touch, but not evident to the eye."

Such are the details of this interesting and instructive case in which the injurious effects of iodine, when injudiciously administered, are powerfully described. The anxiety and depression here described are, it appears, very frequent attendants on the improper use of iodine, and are regarded by our author as the peculiar effect of the medicine, and not merely the result of the concomitant debility ; sometimes occurring in a lesser degree, even when the iodine operates in a salutary manner.

The nervous and muscular systems are next considered in their relations of the effects of iodine ; and we are informed that, in some persons, it cannot be exhibited without giving rise to some of the " countless forms of inward nervous derangement." Among these, a certain degree of tremor is so characteristic, as

to be regarded by the author as a measure of the constitutional influence of the remedy. This is described by Dr. Gairdner as generally beginning with a slight trembling of the hands, similar to that resulting from the poison of lead ; afterwards the arms, legs, and back, become affected ; while, in addition to these symptoms, there is derangement of the stomach and constipation of the bowels. With a view of detecting this affection in its incipient stage, the author recommends the practice of frequently obliging the patient to raise an empty glass, or other light body, to the mouth ; by which means the smallest unsteadiness is rendered obvious. This affection obviously bears a strong resemblance to chorea ; notwithstanding which, Dr. Gairdner regards them as differing in some essential points.

The external application of iodine has sometimes been accompanied with slight pain at the stomach, and copious bilious evacuations ; but these never proceed to the degree of violence which marks its internal exhibition.

When the symptoms of cholera, detailed in the case we have quoted, are brought on by the employment of iodine, opium, in its different forms, is to be regarded, not only as the best, but almost as the *unicum remedium.* In the case mentioned by the author, a fourth of a grain of the acetate of morphia, was given every half hour with great advantage ; the other preparations of opium having entirely failed. In other instances, however, this has not answered in so satisfactory a manner. To the opium may be added bitters and astringents, but not until the disease has begun to abate in violence. Purgatives are represented as invariably and conspicuously injurious, however gentle. The warm bath is never to be neglected.

For the chronic stage of the disease, the administration of aperients and opium is recommended ; and, for the spasms and nervous derangement, light diet, gentle exercise in the open air, and the warm bath. The use of wine and spirits, as well as the exhibition of the ethers and tinctures, are very strongly condemned.

Such are some of the evils arising from the injudicious use of this medicine, and the list is, no doubt, sufficiently extensive and alarming. Nevertheless, it appears as possible to control its energies, and disarm it of its dangerous properties, as to regulate the effects of any other equally powerful drug. Dr. Gairdner informs us that he has used it in " a great number" of cases, without ever meeting with any accident ; having discontinued the medicine when the pulse became frequent, small, and depressed, with watchfulness, and flying pains of the joints, &c. Dr. Coindet has given it to 150 patients ; Dr. Decarro, of Vi-

enna, to 120; Dr. Erlingen, of Zurich, to seventy; Drs. Formey and Hufeland have prescribed it "extensively;" and all with beneficial results. It has also been used by many other practitioners, both in this country and on the continent; the result of whose practice is but partially known.

It is upon the absorbent system that the operation of iodine is most conspicuous, and in no disease is this more remarkable than in bronchocele. Our author proceeds:

"Decarro states, that one of his patients, thirty-eight years of age, after taking the remedy for seventeen days, had the circumference of his neck reduced from one foot seven inches and a half, to one foot three inches and three quarters. Dr. Coindet relates a case of a man, fifty years of age, in which this medicine, taken internally, reduced a very large goitre considerably in size, after six days' treatment only. An old woman, aged sixty-five, who took this medicine under my care for a goitre, with which she had been affected nearly forty years, had the circumference of her neck reduced from twenty-two inches to eighteen, on the twenty-fifth day. Such rapid diminution in the size of the tumor is not to be always expected. In some cases a whole month, and even more, elapses before any effect is visible. In general, however, the powers of the medicine are manifest at the end of the second week, and considerable progress towards cure has been made at the end of a month. I have endeavoured to find out whether there was any thing in the constitution of the different persons under my own observation, or in their state of health, which rendered them more or less apt to be affected by this medicine. I have not been very successful in this inquiry. But I found that, in two cases of women afflicted with extensive and very painful varix of the veins of all the extremities, the effect of iodine was produced with great difficulty.—This fact seemed to coincide with the result of Mr. Magendie's very interesting experiments on absorption, and I accordingly desired one of the persons, to whom I have just alluded, to lose a little blood from the arm. The effect of the medicine was very much accelerated by this treatment; but a consequence I did not look for was also the result of it,—viz. the total and sudden disappearance of the varix, which had commenced during uterine gestation twelve years before. The goitre succeeded the varix after her delivery. I merely mention the facts of this case, which may suggest useful hints to those who may meet with a case similarly circumstanced. Since its occurrence, whenever the medicine is slow in its operation, provided the vessels be full and plethoric, I desire a little blood to be taken away from the arm, and I almost invariably find the action of

the medicine much quickened. I have sometimes, also, thought that the cases in which blood was taken away were cured more easily, and with less suffering, than the others."

The medicine, when administered "with propriety and caution," rarely produces any considerable effect upon the pulse, although it has the remarkable property of stimulating very powerfully the vessels of the tumor. In this remark Dr. Gairdner is supported by the testimony of other writers. Occasionally this symptom of local excitement proceeds so far as to require the abstraction of blood; and for this purpose topical bleeding is generally sufficient. In treating a case of bronchocele with iodine, this peculiarity of its operation is, of course, to be kept in mind; because, as is justly observed by the author, the occurrence of inflammation on an extensive surface in contact with the trachea, is by no means free from danger.

With respect to the forms and methods of administering this powerful medicine;—the hydriodate of potass, as recommended by Dr. Coindet, seems to have obtained a general preference. Dr. Gairdner informs us that the hydriodate of soda answers equally well, but states no reason why it should be preferred to the one in more general use. He has likewise given a trial of the iodates, but found them "at once more inert and more unmanageable."

"I have generally ordered half a dram of the hydriodate of potass to be united to an ounce and a half of axunge, and desired the patient to rub in a dram of this ointment over the surface of the tumor, night and morning. When the tumor is painful, it is not necessary to rub in. The ointment may be used in the manner recommended by Scattigna. All that is necessary is, to choose a portion of the surface of the body where the skin is very tender and thin, and simply to apply the ointment over night. For this purpose, almost any part of the body which is habitually covered may be chosen; but in the axilla, and in the inner surface of the thighs close to the scrotum, the absorption will be found most rapid."

For internal exhibition, Dr. Gairdner gives a decided preference to the solution over the tincture: it is made by dissolving half a drachm of the hydriodate of potass in an ounce of distilled water, of which ten drops may be given for a dose, and the quantity gradually augmented to twenty or twenty-five; but this appears, from the evidence of our author, to be seldom requisite.

The decided effect produced by iodine on the absorbent system, as evinced in the cure of bronchocele, led to its employment in scrofula. The result of our author's observations is thus expressed:

"The first case of scrofula, in which I made use of this medicine, was that of a young lady, eighteen years of age, who had been affected by glandular swellings of the neck for nearly eight years. She used the solution of hydriodate of potass for a month; the dose varied from ten to twenty drops three times a day, with occasional intermission of a day, when the absorption was going on rapidly. At the end of this time she had got perfectly rid of her swellings, and she now (two years since she took the medicine,) remains perfectly well. When she discontinued her drops, so far from having been incommoded by them, her health was certainly much improved. There remained several little fistulous sores, which required the assistance of the knife to heal them. The iodine is not equally efficacious in all cases of this kind. Great numbers, however, yield rapidly under its use, but many of them, also, resist its operation. I have never been able to assign even a plausible reason for this difference of its action in scrofula. In general, I have found such cases yield more readily to the internal than to the external use of iodine. The scrophulous glands of children are not so easily affected by iodine, as those of persons who have attained the age of puberty; and they are also more liable to a relapse."

Dr. Gairdner likewise mentions the case of a boy, of five years old, in whom "it was impossible to doubt, from the appearance of the child, that the mesenteric glands were enlarged." He had been weakly from the period of his birth, and had been gradually losing flesh and strength for two years, with enlargement of the abdomen and irregularity of the bowels. The author gave him twelve drops of the solution of the hydriodate of potass in the day, and gradually increased the quantity to twenty drops. At the end of five weeks he was restored to "comparative health," no other medicine having been given, except occasionally a few grains of rhubarb. In two other cases of a similar nature, considerable relief was afforded; but the result was not, upon the whole, so satisfactory as in the preceding instance.

Dr. Gairdner has used iodine in cases where he had reason to believe tubercles existed in the lungs; and he is inclined to believe it will be found of service in incipient stages of pulmonary consumption, but apprehends injury from its operation in more advanced stages of the disease.

The author has given, in an Appendix, a short notice of some of the best forms of administering iodine; and with these we shall conclude our extracts from his interesting little volume.

"I have here thrown into an Appendix a brief account of the different preparations of which I have had occasion to make mention. It is chiefly extracted from Magendie's Formulary,

which will be found to contain sufficient directions for the chemical and pharmaceutical operations undergone by iodine.

Tincture of Iodine.

Take of Alcohol, of sp. gr. of .842, 1 oz.
Iodine, 39 gr. Dissolve.

"This preparation should not be long kept, as it readily undergoes alteration and decomposition. Alcohol varies in its solvent power of iodine, according to its degree of concentration. The frequent opening of the vessels, therefore, in which it is kept, must occasion a change in the quality of the tincture, by allowing the evaporation of the spirit, and thus occasioning a diffusion of undissolved iodine through this preparation. Mr. Magendie seems also to fear that a decomposition of the alcohol may take place, from the superior affinity of iodine for hydrogen. Altogether this is certainly the most objectionable form in which iodine is used.

Solution of Hydriodate of Potass.

Take of distilled Water, 1 oz.
Hydriodate of Potass, 30 gr. Dissolve.

"I have generally prescribed these two preparations in cinnamon or mint water, in which form they are seldom disagreeable to the stomach. I have avoided, as much as possible, joining them to any tinctures or infusions, as we are yet in a great degree unacquainted with the chemical habits of iodine and the different vegetable substances. It will be sometimes, however, found advisable to use tonics with iodine.

Ointment of Hydriodate of Potass.

Take of Hydriodate of Potass, 1-2 dr.
Axunge, 1 1-2 oz. Mix."

III.

De la Moelle Epiniere et de ses Maladies. Par C. P. Ollivier, d'Angers.

(From Anderson's Quarterly Journal of the Medical Sciences.)

Owing to the labours of our modern physicians, our author is of opinion, that medicine, in a short time, will reach a degree of certainty which was once thought to be altogether ideal; and, with M. Laennec, he imagines that pathological anatomy will become the polar star of nosology, and the surest guide of medical diagnosis. We may observe, however, that similar hopes have been entertained of some favourite practice from the earliest times of medicine; and it is difficult to say, whether this has

happened oftenest from the instability, or the indolence of mankind. We have men who put all their trust in mercury, or purging, or blood-letting, or in the affusion of cold water, or in friction with vinegar and water; or others, who see in almost all medical phenomena, stricture of the rectum, or bile or hepatic torpor. Such practices or opinions, indiscriminately adhered to, may have done much harm; but it is by such means only that their true value can be ascertained. Every one, therefore, who wishes prosperity to medicine, will rejoice at the present rage for pathological anatomy, and will only regret that so many attempt to describe morbid appearances, who know little or nothing about anatomy.

It is from pathological anatomy, especially, that M. Ollivier expects the elucidation of those diseases which have been called nervous, and of which, till the present day, our notions have been exceedingly confused, if not altogether erroneous. With a view of adding to our knowledge on this subject, he has written his present work on the spinal marrow and its diseases; which he has divided into three parts. In the first, he treats of its anatomy; in the second, of its functions; and in the third, of its pathology. In doing this, he has joined his own observations to those of others: and he publishes his work merely as a sketch or outline, to be filled up and corrected by future pathologists. The subject is, indeed, an interesting one, and it is still, as it were, in its infancy.

In his first part, our outhor has made many additions to the anatomy of the spinal marrow; and we regret that our limits will not allow us to give an entire translation of it. He seems to have proved that it was formed previous to the brain, and that the latter is only a prolongation of it.

The spinal marrow is so necessary to life, that there are few animals that want it; and it is always, more or less perfect in proportion, as the organization of the other parts of an animal is perfect. From all that has been written on the subject, from Hippocrates downwards, joined to his own observations, M. Ollivier concludes that the spinal marrow has a direct influence in the production of feeling and motion in the trunk and limbs, and is also an agent for transmitting the manifestations of voluntary actions.

"With respect to the latter power, the spinal marrow is dependent on the brain; the facts, on the other hand, which seem to prove its independence, only show that the influence of the brain, on certain vital actions, is less evident when the organization of an animal is imperfect. The short existence of animals which have no brain, and the vital phenomena of fœtuses, and

very young animals, are a proof of the justness of this remark.—In short, the higher an animal is in the scale of being, the more intimately does its nervous system depend upon a centre. But more is produced by the influence of the spinal marrow than feeling and motion; its influence is extended to the internal phenomena connected with the preservation of life; the circulation of the blood and respiration. Haller has made the motions of the heart depend on irritability alone; yet he has admitted, singularly enough, that their production is influenced, in an especial manner, by the spinal marrow."

After mentioning the experiments of Legallois, Wilson, Philip, Clifte, and Rullier, M. Ollivier observes—

"We must conclude that the heart may act without the spinal marrow; but that when it exists, the action of the heart is subordinate to it. The influence of the spinal marrow upon respiration is much more direct, and much more immediate. This function, indeed, is altogether dependent on it, at least in the mammalia; and the intimacy of this dependence may be explained by the connexions which subsist betwixt the respiratory nerves and the spinal marrow, from which they emanate. If we remove from an animal of the class mammalia, the origin of the eighth pair of nerves, it dies rapidly of real asphyxia, although the other respiratory nerves remain uninjured. It is of asphyxia, also, that those individuals die, in whom the spinal marrow is injured in its superior and cervical portion; and the nearer the seat of injury is to the origin of this pair of nerves, the sooner will death ensue. On opening the bodies of such persons, we find, in general, the lungs, and other internal organs, more or less injured, or crammed with blood; and this congestion is always more evident when the death of the animal has been slow. As far, then, as respiration and the circulation of the blood, is concerned, we may consider the spinal marrow as a centre of insulated vitality, independent of the brain. Do not its motions, which are synchronous with those of respiration, prove still more forcibly the intimate connexion which subsists betwixt it and the respiratory and circulatory organs? In the opinion of several authors, the spinal marrow exerts an influence on other actions of internal life, by means of the great sympathetic, which, according to Legallois, has its roots in the spinal marrow; and I think this last opinion is supported by the experiments since made on the great sympathetic, by M. Weber. He has found that the size of this nerve is always in a direct ratio to that of the spinal marrow; that it is seen, but only in faint outline, in fishes where the spinal marrow is just beginning to shew itself; that, as they increase in size, they preserve exactly the same

proportion; and that thus, for example, it is very large in the frog, but scarcely visible in the adder, and that the spinal marrow of these two animals observes the same ratio. Another observation of the same author, appears to add still more weight to the opinion of Legallois. He found that, in proportion as the eighth pair became enlarged, and was supplied with more numerous and bulkier ramifications, the sympathetic appeared diminutive in size; so that, in certain animals, the parvagum seemed altogether to supply its place. We are thus disposed to admit, that the functions of internal life have their origin in the spinal marrow, or at least, to think it extremely probable that the great sympathetic has its roots there, since the eighth pair, which in certain animals performs its office, has its origin from the spinal marrow, in all those animals which have one."

On a similar kind of reasoning, M. Rochetti has founded his opinion, that the spinal marrow is a principal agent in nutrition; and he observes, that the activity of nutrition in animals is in the inverse ratio of the size of brain, and in the direct ratio of that of the spinal marrow; and that this law holds good, not only in the more perfect animals, but in the crustacea, and in insects and worms. M. Fray has formed a similar opinion, and makes the spinal marrow the seat of the *vis medicatrix naturæ*. But why should we waste our time in enumerating with M. Ollivier, the mere opinions of authors on this subject. Let us rather hear him on a subject, in which a priority of discovery is claimed by an English writer.

"As we have already remarked," he observes, "that the spinal marrow contains the two principles of feeling and motion, we may inquire in what parts of it each of them resides? The spinal marrow is formed of two substances; the one external and white, the other internal and cineritious; and as anatomy shows that the filaments, which compose the roots of the spinal nerves, are evidently connected with the latter, we may suppose that it is from the cineritious part that the nerves principally derive their action. We have seen, also, that the filaments of the anterior roots are remarkably smaller than those of the posterior roots. The experiments of C. Bell, and Magendie, show that this material difference is connected with a difference of function; and they have proved that feeling emanates from the posterior, and motion from the anterior roots. However, it does not appear that each of these functions is exclusively appropriated to each order of roots; for when we excite, separately, the nerves of feeling, or the posterior, contractions are produced in the muscles to which these nerves are distributed, although, in general, they are more complete and much stronger, when the

exciting cause is directed at once against the anterior nerves.—In like manner, we observed slight marks of sensibility, when the anterior roots alone are irritated."

It would appear that this intermingling of energies depends on the two cineritious fasciculi of each lateral half of the spinal marrow being intimately blended at the point of contact.

"If," says M. Ollivier, "we consider the bulk formed by the junction of these four cineritious fasciculi relatively to the white substance which surrounds them, we must allow that this central portion is much larger in man than in animals. This seems to be a new proof that the cineritious substance is the very seat in which the active principle of the spinal marrow resides; for it evidently becomes less with age, and is much less distinct in the spinal marrow of old people."

We shall not follow our author in his speculations concerning the use of the cerebellum, and other parts within the cranium; agreeing entirely with him that the diversity of opinion on that subject only shows that the functions of these parts are as yet but little known. The same thing may be said of the white substance of the spinal marrow.

We now enter on the third part of the work. It is divided into ten chapters; on each of which we shall be more or less diffuse in proportion to its novelty or importance.

No organ in man, in M. Ollivier's opinion, is so little liable to disease as the spinal marrow. Even those general affections which attack all textures and all organs, seem always to respect it; and though cancer has often attacked the brain, it has almost never been detected in the spinal marrow. Its diseases as yet have been little studied, and many of them are extremely rare; but Hippocrates, Celsus, Aritæus, and Galen, were in so far acquainted with them.

In the first chapter our author considers the malformations of the spinal marrow; a subject which is rather curious than useful. There are cases on record where it and the brain have been completely wanting; but in general this was more apparent than real. In such cases a sac has been formed, more or less irregular, occupying the superior and back part of the head, extending to a variable distance down the spine, and filled with a yellow and viscid fluid. This sac is generally torn at birth, in which case its existence is attested by irregular membranous shreds, but without a single trace of brain or spinal marrow. The fluid above-mentioned is the medullary matter in its rudest state.—Upon the whole, our author concludes, that the absence of these organs is never primitive.

The second division of this chapter is employed on the de-

formities of the spinal marrow. We shall notice the first and third kinds only, as our author has found no account of them in books. The first kind is the greater or less deformity of its upper extremity.

"It would be difficult," M. Ollivier says, "to give an exact idea of the form which the spinal marrow assumes where there is no brain; sometimes, indeed, there are vestiges of the organ, but in that case their figure, their arrangement, and their mode of union with the spinal marrow are so varied, so irregular and confused, that it is impossible to give an adequate description of it."

In two cases, however, which M. Ollivier dissected, he found the appearances exactly similar; and he has given a description of one of them. The child, a twin, lived rather more than twenty hours. Its face was not so much deformed or flattened as it usually is in such cases. A nipple-shaped, fungous, flabby mass, of a violet colour, and covered by a thin transparent membrane, occupied the centre of the uneven surface which was formed by the summit of the head, or rather by the basis of the cranium; all round, the skin, which was covered by pretty long hair, showed the appearance of irregular scars. A part of the above mass, of the size of a filbert, was bent backwards and covered the orifice of a hole, two or three lines in diameter, which was evidently connected with the cavity of the spinal canal; all the hollows of the uneven surface and of the nipple-shaped mass, and the neighbourhood of the hole were moistened with a limpid and colourless serum," (*serosite.*)

The flabby, violet-coloured mass was found to be in the situation of the Sella Turcica. But we cannot think that there would be much utility in following the author through the remainder of the dissection; and we shall merely observe, that from the valvula Vieussenii, to the middle of the body of the second lumbar vertebra, where it terminated, the spinal marrow was of its natural appearance; the consistence of its substance being pretty firm, but containing little blood, though all the vessels of the pia mater were so turgid, as to make the membrane quite red. The mucous membrane of the bowels, it may be observed, also showed some marks of inflammation.

The third kind is the bifurcation of the spinal marrow, where the spine is single for a certain length and then is split into two, either to support two heads, or to form two separate trunks below, united above to one neck. Of these there are many instances in books; but no notice has been taken in any of them of the spinal marrow, so that we know not the manner in which the two cords are united, where the spine becomes single. There is

room for believing, however, that the internal cineritious substance, formed of four distinct fasciculi, loses insensibly its crucial form, and that the two fasciculi, answering to the side of the junction, become shorter as they advance, and at length entirely disappear. A case in the Bulletin of the Faculty of Medicine, p. 201, seems to favour this opinion.

A considerable variety has been observed in the length and breadth of the spinal marrow, and a canal has been sometimes detected in it—which, however, is always the product of disorganization, and in general seems to be a prolongation of the fourth ventricle. It is also sometimes formed mechanically by the blow pipe. Speaking of congenital dropsy of the spine, he observes that the opening of the humour is always the cause of death, and that the very few cases to the contrary ought not to invalidate the general rule, nor authorise a practitioner to puncture it. When death then occurs, it seems to be owing to an inflammation of the arachnoid; when extending from below upwards, produces, first of all convulsions, and then asphyxia. Instead then of puncturing, we should use remedies externally and internally, which may favour the absorption of the fluid; but these we think it unnecessary to particularize, as what our author has suggested on that head, is either already known or will readily occur to an intelligent observer.

Atrophy of the Spinal Marrow.

No author has mentioned the disease under this name. Bonetus, Morgagni, and Chaussier have noticed it.

"I have observed twice," says M. Ollivier, "a considerable diminution of the bulk of the spinal marrow; and it was so remarkable that it could be attributed to no other cause but real atrophy. The first instance of it I found in the body of an idiot, twenty years old, who was rickety, and had died of the most complete wasting. The lower extremities, in particular, were much wasted; the thighs strongly bent upon the pelvis, and the legs upon the thighs. This drawing back of the parts depended upon a permanent contraction which had existed for a long time. A large ulceration of the integuments had exposed the posterior part of the pelvis, and in the middle of it was seen a projection of the size of half an inch, formed by the end of the coccyx, which was black and dead; the veins of the spine were stuffed with blood; and in the posterior and middle part of the dorsal region, the cellular texture, exterior to the dura mater, was injected with a reddish gelatinous-like serum. The cavity of the arachnoid contained a rather abundant quantity of limpid serum; and the posterior and anterior median veins were fully distended with black blood, particularly those of the lumbar re-

gion. The substance of the marrow was of the ordinary consistence, *but its bulk was reduced to about one half of what is seen in the natural state; the lumbar protuberance (renflement) of the marrow was scarcely observable, so that the cord gradually grew thinner till it reached its termination.* The roots of the lumbar nerves were like threads: there was nothing extraordinary in the brain; the cortical substance formed a layer of very little thickness; and the organs of the other cavities were in a sound state. I could not learn what had been the appearances in this patient previously to his death, except that for several years he could not walk, on account of the contraction of his inferior extremities.

"The second instance of atrophy of the spinal marrow was in the body of a pretty fat old man of short stature, whose limbs had not shrunk in the smallest degree; but every where the spinal cord was diminished to about two thirds of its ordinary size. It was most contracted, however, at the lower part of the dorsal region, near the ninth vertebra; *and here its diameter from side to side was about three lines and a half, and from behind, forwards, little more than two lines. The extent of this diminution was about an inch; and the lumbar protuberance (renflement) was not so conspicuous as usual.* The nerves which issued from it did not appear to be smaller than they are naturally; the substance of the marrow was neither softer nor firmer; and the membranes were not perceptibly injected. I could get no information with regard to the history of this individual. In both cases the spinal marrow was of its natural dimensions. It is in old people that we always find the most striking diminution of the spinal marrow; and in this way we may account for their comparative debility of motion."

This atrophy, our author thinks, may be occasioned by a defect in the nutritive process, or a local absorption may be produced by some mechanical cause—and he gives an instance of the latter. It is too long to be inserted here. In the cavity of the spine there was a complete interruption of the spinal cord from the ninth dorsal, to the commencement of the first lumbar vertebra, for a space approaching to four inches. The pia mater which established the continuation of the spinal cord was flattened longitudinally; but its vessels were not more injected at this point than in the rest of its extent. When laid open longitudinally no trace of medullary substance was found in its cavity; and though its sides were in contact they did not adhere.

In his third chapter, our author treats of wounds and bruises of the spinal marrow; but as most of his materials are gathered

from well known writers, we shall not transcribe any part of them; neither shall we give his summary of the symptoms, prognosis, and treatment of such cases, as we think he has not shown a great deal of talent in conducting, or arranging his matter.

The fourth chapter, on compression of the spinal marrow, contains little novelty, if we except a few cases; indeed compression of the spinal marrow has many things, in common with its wounds and bruises. It may take place all at once, or slowly; and, in the latter case, the symptoms, for a long time, attract but little notice. They commonly depend on rickets, scrofula, and syphilis.

"One rickety patient, sixty years of age, who was only four feet high, and much distorted, was, in 1820, exposed for several months, in a ward of the Hospital de la Pitie, to cold and damp, and soon began to complain of a constant deep-seated pain in the middle and back part of his head, and down his neck. The pain gradually increased, and became much worse whenever he had a mind to eat or drink; imperceptibly the motions of his head became more difficult, and he felt, as he said, a kind of crackling in his neck. For six months, the disease continued much in the same state, when he was removed to the Bicetre, in 1821. A tumour was now observed near the neck; and his head was bent a little forward. A blister had been applied to the back part of his neck. Such was the state in which I found him.

"There was a complete numbness over every part of his neck; but he felt a momentary relief when gentle pressure was made with the hand upon the tumour. The skin—of the upper part of the chest, nearly as far as the third sternal rib; that of the upper and lower extremities; and that of the trunk, as high as the epigastrium, all round—was the seat of constant numbness, accompanied by excessive itching, which the patient found it impossible to allay. Thus, all round the chest, there was an extent of about six inches (from the third to the seventh sternal rib) where the skin had preserved its natural sensibility. His urine and fæces were passed voluntarily, and his digestion was uninjured. In September, 1822, the upper extremities became weaker, the patient being scarcely able to move them, or to grasp any thing firmly with his fingers. The lower extremities were nearly in the same state. Respiration was in some degree confined. At length all these parts became gradually paralyzed, but still the skin retained its sensibility in that space of the chest, which I have already mentioned. The patient died on the 31st December, after an extensive gangrene had taken place on the sacrum and left trochanter.

"*Dissection.*—The substance of the brain was pretty firm, but without injection of the vessels worth mentioning. About half an ounce of muddy serum was found in the left ventricle.—The second cervical vertebra was enlarged outwardly and inwardly; the two first lumbar vertebræ, and their articular cartilages were diseased; and about an ounce of limpid serum was found in the cavity of the spinal arachnoid. At all these diseased points, the dura mater was thickened, and the pia mater more vascular than usual; but opposite the second vertebra of the neck, there was a depression of the spinal marrow, nearly five lines in length, and about a line broad in its centre, but insensibly diminishing in breadth at the sides. Its depth might be about half a line. Under this depression, the spinal matter was softer than usual, but not otherwise altered. In other parts the cord was softened, particularly at the lumbar protuberance, where its white and cineritious parts were quite destroyed, and had almost become liquid; yet the nerves, which corresponded to these altered parts, had preserved their natural dimensions. The softened points of the spinal marrow corresponded exactly to the parts which had been the seat of the painful itching, and of the palsy which had succeeded it; and it was not without astonishment I saw the marrow perfectly sound in the situation which was connected with the circular space on the chest, where, during life, I had observed that the skin retained its sensibility."

Compression may be occasioned, also, by caries and displacement of the bones—by internal tumours, and by dilatation of arteries in the neighbourhood of the marrow; examples of all which may be found in books; and our author has himself given some. The enormous dilations which, in old people, are so often found in the veins of the spine, and in some of the spino-medullary veins, will also produce a slow compression; and may not tardiness of motion, in such persons, be partly owing to this cause? But an effusion of any kind in the cavity of the spinal arachnoid, the presence of acephalocysts, without or within the membranes, and the gradual development of tubercles in the substance of the marrow or its membranes, may occasion its compression.

"When compression is beginning to exist, a kind of numbness is often felt at first; afterwards there is a convulsive retraction of the limbs, and at length palsy. It is principally, where compression is the result of caries of the vertebræ, that we find these latter symptoms supervening, and they seem to be occasioned by inflammation of the membranes, which frequently exists in this case. When convulsions take place, with retention of urine

and fæces, instead of their involuntary evacuation, some authors are of opinion, that the disorganization of the marrow is only partial; but they imagine that its destruction is complete when there is palsy, though not unfrequently there is compression, when no symptom indicates its presence."

Sudden compression is, in general, mortal; especially when there is a complete loss of feeling and motion, immediately after the accident. The paraplegia, also, which results from chronic compression, is incurable.

"When compression of the spinal marrow is evidently the result of a fracture, with depression of parts of one or more of the vertebræ, we naturally conceive," says M. Ollivier, "that the first indication is to remove the compression, by raising the pieces of bone that have been depressed. This operation, which had been so often performed on the skull, had never been attempted on the spine, when Mr. Cline, junior, practised it, in 1814, at St. Thomas's Hospital. The attempt was unsuccessful, and the patient died the day after the operation."

It was performed again in the same Hospital, with partial, but momentary benefit.

We give our author's remarks on the cure, and we may observe, that a great part of it will apply to wounds and contusions of the spinal marrow.

"When the sudden compression of the spinal marrow is accompanied by violent contusions, and when the patient is of a stout make, it is always useful to begin with general blood-letting, with the view of guarding against local congestion, the effects of which cannot but be hurtful; and we employ, afterwards, the ordinary method of cure, by derivation. When compression is the consequence of a certain alteration of the osseous texture, and occasioned by rickets, scrofula, or syphilis; these are the diseases which must be attended to. Compression, occasioned by internal aneurism, hydatids, tubercles, &c., is commonly incurable; even if there were symptoms which certainly indicated them."

The fifth chapter is employed on concussion of the spinal marrow. It is occasioned by falls, or blows on any part of the spine. It is sometimes accompanied by an effusion of blood on the surface of the spinal dura mater, or infiltrated through the loose cellular texture which covers the membrane; or, when concussion is the effect of a blow on the spine, there may be only a single mass of coagulated blood, which depresses the dura mater opposite to the spot which had been struck. Sometimes the pia mater of the marrow is burst in one or more places; and sometimes both the dura mater and arachnoid are similarly af-

fected; and, in some cases, there is a hernia of the spinal marrow; all the three membranes may, also, burst at once. Effusions of blood are also found in the cavity of the arachnoid, when vessels have been ruptured by the concussion. When an alteration takes place in the marrow, it generally becomes softer, tending, if the patient live some time, to a lucid state; its colour is of a yellowish grey, the white and cineritious portions are indiscriminately blended; and sometimes the capillaries which cross it, are seen in an inflamed state. The vessels of the pia mater, also, where that membrane covers the diseased part of the cord, are fuller of blood than ordinary. Among the cases given by M. Ollivier, we particularly refer the reader to the curious case of Clotilda Frison, which occurred at the Hotel Dieu of Angers. In some cases the concussion appears to have exerted its hurtful influence only upon the sensibility, which emanates from the filaments of the sciatic nerves in all their extent, whilst that which depends on the crural nerves is preserved entire.

The symptoms resemble those occasioned by wounds of the spinal marrow. Convulsions are sometimes present.

"In some cases," says our author, "the palsy, which at first had been confined to the lower extremities, insensibly mounts up again, and produces death, when the general state of the patient gave a hope of recovery. When the concussion has not been very great, the symptoms, on the contrary, gradually abate; feeling and motion again make their appearance by degrees, sometimes in company; but feeling sometimes by itself at first, and thus the nervous and muscular functions are restored to their original integrity."

Recoveries are not uncommon, even where patients have fallen from a great height; while others have died in consequence of falling backwards off their own feet. Death generally follows a severe concussion of the upper part of the marrow; but when the lower part of it has been the seat of injury, life has been occasionally prolonged for months.

"In concussion of the spinal marrow—the first remedy is blood-letting; and, if the patient is of a robust habit, it should be repeated frequently. Local blood-letting, either on the part of the spine injured, or over its whole extent, is equally advantageous; of course, it should be less extensively employed, if the patient is of a weakly constitution; but, in place of leeches, frictions with an irritating liniment, dry cupping, and rubefacients may be substituted with advantage. But in every instance we should begin with a general blood-letting. When the symptoms continue, derivative remedies are likewise very effica-

cious. If there is retention of urine, the patient's water must be drawn off with the catheter, and if he is constipated, clysters, slightly purgative, should be administered. Dry rubbing of those limbs which have been attacked with palsy, may likewise assist in restoring feeling, and the power of motion to the parts. The patient, besides, should be restricted to a low diet ; and his ordinary drink should be diluting gruels (viranes.) Should there be a partial luxation of any of the vertebræ, we can do nothing more than apply discutient compression on the seat of the deformity, and recommend rest."

Such is the treatment recommended by our author, which, in a similar case, would readily suggest itself to any man moderately acquainted with his profession : and which, possessing so little novelty, we should apologize to our readers for inserting ; did we not conceive it to be our duty to give them an idea of the author's practice in his own words.

The effusions observed in the spinal canal, which M. Ollivier treats of in his sixth chapter, are either sanguineous, serous, or gaseous. They may exist on the outside of the dura mater, or in the cavity of the serous membrane which envelopes it and the pia mater ; and in some cases they are found, at the same time, betwixt the arachnoid and the pia mater : or they may exist in the interior of the spinal marrow. Our author never knew a sanguineous effusion occur here spontaneously ; it is generally the consequence of external injury. Sometimes the blood effused is in such quantity, as not only to fill the canal, but to ingurgitate into the cranium. Vessels spontaneously ruptured at the base of the brain may produce it very suddenly ; and such effusions into the spinal canal are by no means uncommon.— *Primitive* extravasation of blood, however, may occur not only in the spinal arachnoid but in the inside of the cord itself, similar to that which in the brain forms apoplexy ; but, as yet, it has been met with only in its upper portion. In the cavity of the spinal arachnoid we frequently meet with serum in various quantity ; indeed it is always more abundant there than in other serous cavities, in proportion to the extent of the membrane.— The serum is sometimes yellow and limpid, or whitish, or muddy ; but it is rarely flaky, although it is pretty often bloody. It generally fills only the lower part of the canal ; but it is diffused through its whole extent : it constitutes *hydrorachitis, or spina bifida.* In hump-backed patients the cavity of the arachnoid contains much serum. Sometimes an accidental injury of the membranes will occasion a very rapid and abundant exhalation of serum. It is sometimes the consequence of hydrocephalus ; but there can be no doubt of its often existing as a primitive dis-

ease. In a portion of the canal the medullary substance may be slowly absorbed and replaced by a serous fluid filling the cavity of the pia mater.

There is no symptom which points out with certainty the existence of an effused fluid in the spinal arachnoid ; far less any by which we can ascertain the nature of the fluid. We can merely form a probable conjecture from an attentive examination of the case. But what our author calls ascending and descending palsies, are supposed to have often some connexion with effusion into the spinal cavity. The remedies he speaks of in this case, are not materially different from these recommended in concussion, &c.

Speaking of gaseous effusions, our author observes—

"I have never noticed a single particle of air in the cerebral arachnoid of those subjects, in whom I had detected it in that of the spinal canal ; yet we may readily conceive that these two phenomena may depend on each other. It is not uncommon to find the lumbar portion of the membranous canal, more or less distended by a gaseous, inodorous, colourless fluid ; and which cannot be attributed entirely to putrefaction. In a woman, sixty-five years old, who died of chronic peritonitis, I found the lumbar region of the canal very much distended by a gas, which escaped instantly upon my puncturing the dura mater, when the turgescence of this membrane gradually subsided. The luminous texture under the arachnoid, which covers the roots of the lumbar nerves contained a prodigious quantity of very fine air bubbles, which floated above the limpid serum effused into this part of the canal. The vessels of the spine were not injected. This woman had been dead twenty-two hours : the body, which was very fat, showed no mark of approaching putrefaction. It was in the beginning of October, 1822. In the same subject I found an emphysema of the cellular texture, lying under the mucous membrane of the stomach."

M. Ollivier has also found air collected under the spinal dura mater in children ; and in one man and one woman, betwixt the arachnoid and the pia mater ; in all of which subjects, the dissection had been made within twenty-four hours after death, and in February and March. M. Ollivier thinks that this separation of air is independent of putrefaction, but he cannot say whether the kind of disease has any effect in its production. He detached it after hydrocephalus, tubercular phthisis, a cancer of the womb, and pneumonia. Bonetus and Spielenberg, are the only authors who have given instances of it.

In the seventh chapter we have an account of arachnitis, or inflammation of the arachnoid.

"It is very seldom that we find," says M. Ollivier, "the inflammation of the membranous coverings of the spinal cord confined to the vertebral canal alone. Inflammation generally, at the same time, attacks the coverings of the brain. For the most part, the arachnoid which lines the dura mater of the spine, and lies over the pia mater of the cord, is covered by a whitish opake exudation, something like a membrane; more or less adherent, and of variable thickness and consistence, and which is found sometimes in the whole length, and sometimes only in a portion of the fibrous canal of the spine, occasionally blending together all the roots of the lumbar nerves. Puriform matter has been found several times betwixt the arachnoid and the pia mater, as if it had been exhaled, not in the cavity of the serous membrane, but on its exterior surface. Serum is, for the most part, contained in the arachnoid; and there may be even an acute dropsy of this cavity. It sometimes appears of a violet-red colour, occasioned by the injection of the vessels which lie under it; and it appears thickened. Sometimes we find insulated spots which exhibit evident traces of local inflammation; and they are oftenest seen where there has been caries of one or more vertebræ; indeed they are seldom met with, unless there be some disease of the spine. At times the arachnoid shews no mark of inflammation, but its cavity is filled with fluid blood, the product of accidental exhalation. Its inflammation does not always extend to the interior of the membranes of the cord; but in general, all their vessels are more or less injected. With inflammation of the membranes, that of the spinal marrow itself may, or may not exist. As yet anatomical research has not been able to detect vessels in the arachnoid; and yet all authors speak of its inflammation. Is it not probable that the vessels which lie under it, have been mistaken for its proper vessels? It is very seldom that we find it thickened. In an insane person, I once found it very considerably thickened, from the interior union of the arachnoid and the pia mater of the marrow, and extending to the length of three inches below the cervical protuberance.—The union of the two membranes formed a whitish and opake surface. I have several times observed partial injections, which, on a superficial examination, might have appeared to be in the spinal arachnoid; but, on separating it from the dura mater, it was easily seen that the injected vessels were situated under the serous membrane, the thinness and extreme transparency of which allowed the minutest branches to be readily distinguished."

Hippocrates seems to have described this disease under the name of pleuritis dorsalis; though his prognosis is not conform-

able to that of modern times. Its symptoms are often combined with those of cerebral arachnitis; yet it seems to have two pathognomonic symptoms, one or other of which is always present, if they do not appear in company. The one is a general contraction of the muscles of the posterior part of the trunk, varying from simple muscular rigidity to perfect opisthotonos; the spine in its whole length forming a kind of inflexible bow. In cerebral arachnitis, the cervical portion of the spine may be affected in this way, but never the whole of it. The other symptom is a pain in the region of the back, extending all along the spine, but severest at the place where the inflammation is most acute.—This pain is, as it were, irregularly intermittent; but it is never entirely absent: indeed, in most cases, it is extremely violent. These two symptoms render the movements of the patient very painful; and at times there is a degree of pain and stiffness in the lower extremities, with rigidity of the arms and hands, and locked jaw, convulsions, or palsy, and difficult panting respiration. The face also may be flushed, and the pulse quick and various; febrile symptoms may be present. Tetanus cannot always be ascribed to inflammation of the spinal membranes, though they have been found influenced in some cases of traumatic tetanus. M. Janson says that the palsy of the interior extremities in distortion of the spine does not depend so much on the curvature of the vertebral column, at the moment when the distortion becomes evident, as on the inflammation of the cellular texture in the spinal canal; and this he thinks is agreeable to his experience. In such a case, he has also found the spinal marrow and its flattened membranes inflamed.

"It seems to be the universal opinion," our author observes, "that death is always the consequence of arachnitis; yet would not the thickening which I observed in the body of an insane person, and which was evidently the result of an old inflammation, argue that arachnitis may be cured to a certain extent? It is rapid in its progress, but it is difficult to fix its exact duration. In one case it was found to last about thirty days, though a patient has been known to die on the third day; but we can come to no positive conclusion on this subject: our observations as yet, have been but very limited. Can it become chronic? We are acquainted with the particular causes which are most apt to produce it. The sex and age of the patient seem to have no effect in predisposing to it. Severe contusions and fractures of membranes produce it; violent exertions may dispose to it; and it is often occasioned by caries of the vertebræ."

"In the very commencement of the disease, we must have recourse to free and repeated general blood-letting; particularly

in young and vigorous subjects ; but these should not prevent local blood-letting, particularly with leeches. These last should be applied in great number, all along the vertebral canal, and on both sides of the projecting part of the spinous processes. The whole body, also, should be placed in a bath, and each time it is used the patient should remain in it for several hours. At first, ulcerative remedies are thought to be improper ; but when the disease has lasted some time, it is likely that they may be of service. The nature of the disease imperiously demands the strictest diet ; the patient, therefore, should be made to drink freely of diluting, or emollient ptisans, or gruels."

Myelitis or Inflammation of the Spinal Cord.

Diseases, according to M. Ollivier, have been described under this name, which seem to have been simple arachnitis. In myelitis the substance of the marrow is generally softened ; to a certain extent disorganized ; and sometimes converted into a yellowish fluid resembling pus. Sometimes the cord is softened in its whole thickness ; sometimes in one of its central halves only, to a variable extent ; and at other times, this is more evident on the side of its posterior, than its anterior aspect, and vice versa. The cord may also be softened in its cephalic, or in its cervical, dorsal, or lumbar portion ; and at the place where the softening exists, the volume of the cord may be increased.— This state M. Recamier and others have regarded as a particular alteration of the nervous system, altogether independent of inflammation, but in most cases, there can be no doubt of its being the result of inflammation. Besides, it has been observed, that of all the parts of the spinal cord, the lumbar protuberance is the part which is most frequently softened and disorganized ; and next to it, in this respect, is the cervical protuberance ; and it is in these two parts of the cord where the greatest quantity of cineritious matter exists, and where, consequently, blood vessels are most numerous. M. Dupuytren has observed the same thing in horses. Softening of the brain, also, takes place, most frequently, in its cineritious substance. In the nervous system, the result of inflammation is the softening or hardening of its substance. When thus hardened, the nervous texture resembles the white of a hard-boiled egg, but no vessel is seen to penetrate its centre ; neither, in many cases, have the membranes indicated any change resulting from inflammation.

"In a young girl, 23 years of age, says our Author, who had been attacked with epilepsy, for the first time in 1814, and whose body I opened in 1822, the consistence of the spinal cord in its

whole length, and when separated from its membranes, was so great, that I could not, without difficulty, crush it betwixt my fingers, even when I pressed it strongly ; and here there was no trace of inflammation, either in the membranes, or in the nervous texture. If such a state rise from inflammation, it must have been of the chronic kind, for it has been found only in persons who have long laboured under nervous complaints. But on the contrary, the softening is the consequence of acute and rapid diseases."

M. Ollivier has given the history of six cases of softening ; one of hardening ; and another, a disease of the spinal marrow, the subject of which is still living.

Symptoms.—They are not easily distinguished. The most constant is a sharp, deep-seated pain, accompanied by a feeling of pungent heat over the whole length of the spine, and which motion renders much more severe. According to Klohss, it is much increased when the patient lies on his back on a feather bed instead of a mattress ; but pressure never renders it more acute. To the pain of the back, which may exist only in a part of the vertebral column, is added a state of stupor, accompanied by troublesome pricklings (fourmillemens) in the lower extremities, and this stupor is more or less complete, in proportion to the rapidity of the inflammation. An involuntary excretion or retention of fæces and urine are generally in some degree present. Sometimes the palsy is observed to proceed from below upwards, till it stops the breathing and causes death by asphyxia, but sometimes, (more rarely indeed,) it follows an opposite direction ; sometimes there is palsy of motion only, the patient preserving the power of feeling ; sometimes feeling alone is abolished ; but these differences depend on the part of the marrow which is the seat of *disease* (alteration.) For the most part, the palsy appears at first only on one side of the body, afterwards in both. On some occasions the limbs are subject to convulsions from the beginning, which are succeded by palsy. Sometimes they are permanently contracted and painful ; at other times they are quite flaccid.

" M. Janson supposes that palsy without contraction, is a proof that the nervous texture alone is inflamed ; whereas the presence of contraction shows that inflammation has also attacked the membranes of the cord. The pulse, for the most part, is frequent and irregular. To these, which in so far may be considered as the pathognomonic symptoms of myelitis, several others are sometimes added ; such as tetanus, trismus, loss of voice, difficulty of swallowing, dyspnœa, &c. But these symptoms do not appear till the disease has reached its highest degree

of intensity. At times the eye is extremely sensible to light, and the ear to sound, but the patient never becomes blind or deaf. These last symptoms evidently arise from irritation of the brain or its membranes. But there is never any very apparent injury of the intellectual functions. Neither do we observe in this disease, stiffness, and crookedness of the spine, as in spinal arachnitis, a symptom which sufficiently distinguishes the latter from myelitis."

If the part affected is the upper region of the marrow, at no great distance from the annular protuberance, there is often then confusion of the senses; furious delirium; locked jaw; grinding of the teeth; a red dry tongue, difficulty of swallowing, inability to speak; hurried and confused breathing; vomiting, &c.; palsy of the whole body; speedy death; with the phenomena of asphyxia. Symptoms of hydrophobia also have been sometimes noticed. When the cervical portion is the seat of inflammation, there is often complete rigidity of the muscles of the neck, and in the upper extremities, which are sometimes convulsed, at other times palsied. Respiration is then, for the most part, laborious and very painful, and is performed only by the diaphragm. When the disease is seated in the nervous substance of the dorsal portion, betwixt the two protuberances, the trunk is agitated by convulsive and incessant shocks, which do not affect the limbs, unless the disorganization occupy a part of the protuberances. Breathing is short, hurried, and diaphragmatic; and there are palpitations and irregular pulsations of the heart. To these symptoms M. Pinel, junior, adds the almost complete annihilation of the functions of the nervous system, and a general state of fever denoted by an excitement of all the functions.

"When the lumbar portion is attacked, or rather the inferior protuberance of the spinal cord, then we have palsy of the lower extremities, involuntary excretion or retention of the fæces and urine, and a deep-seated pain confined to the region of the loins. Priapism, more or less complete, has also been observed, particularly, if the disease has been the consequence of a blow or a fall; and fits of epilepsy have been present in cases where a pultaceous softness of the spinal cord has been observed after death. The more extensive the inflammation, the more numerous are these symptoms. When the disease is chronic, there is in general little pain. But we may suspect its presence where there is palsy of the limbs, and disorder in the functions of the bladder and rectum; and they make their appearance gradually. There have been instances where palsy has never shown itself; but such cases are rare."

The course of myelitis is rapid or slow. The patient some-

times dies on the third or fourth day, and sometimes not till the eighteenth. Its duration in the chronic state is uncertain.—Myelitis may be cured, but it generally terminates in death.

It is generally the result of external causes ; such as violent exertions, falls, blows given to the spine, changes in the vertebræ ; whether from external violence, or rickets, scrofula, &c., and exposure to the sun in hot weather, according to Bergamaschi. The disease rarely proceeds spontaneously from an internal cause ; though this author speaks of its being produced by the retropulsion of an erysipelas or a rash ; and by a neighbouring inflammation ; that of the brain, for instance, spreading to it. M. Ribes and Frank, think that it is often brought on by rheumatism. Its remedies are nearly the same as those for spinal arachnitis. In the chronic state, we should use topically irritating applications, aromatic fomentations, *douches* of water a little soft, and of the temperature of 30 or 40 ; and the other means recommended for chronic arachnitis. The feelings of the patient indicate the necessity of rest.

In the ninth class, we have an account of the morbid textures which are produced in the membranes of the spinal marrow, or in its substances. The morbid textures which make their appearance in different parts of the body are of two kinds : the first, which are called transformations, are analogous to some of the natural textures of the animal economy ; and the second, which are not so, are new productions. As yet, two only of the first kind have been observed in the spinal membranes—viz. the cartilaginous and osseous textures. Among those of the second kind, tuberculous matter and animated foreign bodies are the only ones which have been as yet detected. In the body of the spinal arachnoid, we find pretty often small plates of an opaline white ; of an irregular form ; rarely more than three lines in diameter, and gradually diminishing in thickness from the centre to the circumference ; and, therefore, they are much more opake in the centre. They are rarely found in the membranes of the cervical portion of the marrow. If they are numerous and small in size, the spinal marrow, when we cut into the dura mater, appears to be covered by a limpid fluid ; in the midst of which, a great number of small bits of white soap seem to be floating ; and this deception is occasioned by the extreme transparency of the arachnoid. On the side next the marrow, these plates are rough, though smooth and polished on the outside. But for a more particular description, we must refer to the work itself. They exactly resemble the cartilage of other parts ; and when they are dried along with the arachnoid, they almost equal it in transparency. M. Ollivier has found no well

authenticated case where these plates were osseous; he has several times seen the external surface of the spinal dura mater with asperities really osseous, when there existed a caries of the vertebræ; and they were opposite to the diseased portion of the bone, at which place there was generally a purulent fluid, in greater or less quantity. In one case he found the dura mater separated to the extent of about three inches from the body of the cervical vertebræ; its corresponding surface being covered with small osseous asperities; but with the effusion of pus.—When there is a scrofulous cancer of the spine, it is not uncommon to find tubercular matter in the substance of the spinal membranes. Sometimes the matter is, as it were, infiltrated into the texture of the membrane; at other times it forms an insulated kernel; in a word, a tubercle, surrounded by its own covering. These tubercles are also formed in clusters, and thickening the membranes, are thus capable of pressing upon the spinal marrow. But tubercles are sometimes present when there is no affection of the bone. In a child, which died of tuberculous phthisis, M. Gendrin found a softened tubercle betwixt the spinal dura mater and arachnoid, at the left lateral part of the base of the cranium, near the occipital foramen. Its size was that of a small nut. Nothing during life had marked its progress. Although tubercles are frequent in the substance of the brain, they have not been found in any other than the cervical portion of the spinal marrow; at least there are but very few instances of their existence farther down. The symptoms which indicate the presence of tubercles are not well known; it is thought, however, that they sometimes produce epilepsy. It is not uncommon to find vesicular worms (hydatids) of the kind called acephalocysts, likewise in the osseous canal of the vertebræ and the spinal dura mater, or at least in the cavity of the arachnoid. They appear, for the most part, to have penetrated by the holes situated where the vertebræ unite, which are then enlarged, and communicate with a cyst of greater or less dimensions, adhering to the body of these bones. Acephalocysts have never been found in the interior of the spinal marrow, though the kind of hydatid, called polycephalus, has been met with in the fourth ventricle, were so large as a hen's egg.

In his tenth and last chapter, our author considers those diseases, which, in the opinion of some authors depend on an alteration in the spinal marrow, or its membranes. According to Alexander Tralles, and Galen, when palsy affects the limbs only, the seat of the disease is in the spinal marrow, or at least at the origin of their nerves; but, as our author thinks, this opinion is too

exclusive, and not always agreeable to experience. Again, Hoffman has attributed epilepsy to an effusion of the cerebral membranes, and simple convulsions to some change in those of the spinal marrow; and M. Ollivier has found the latter opinion perfectly agreeable to fact. But in epilepsic patients, disease has frequently been found in the spinal marrow. In ten individuals of this description, M. Esquirol, found nine who were diseased in the *medulla oblongata*, and in many cases of epilepsy he has obtained much advantage from the application of moxa along the spine; chorea has also been attributed to diseased spinal marrow, but not on sufficient grounds. In tetanus, marks of inflammation have been found in the spinal marrow and its membranes; but in other cases, no change could be observed; yet it is rational to employ the same remedy for it as for arachnitis and myelitis. Brera, in a case of tetanus, from a contusion in the right thumb, applied 120 leeches along the spine, and gave Prussic acid with benefit, but the patient died; and on dissection, the spinal marrow was found inflamed on the side which corresponded with the original injury. The same thing has been observed in the locked-jaw of new-born children, and in hydrophobia. M. Ollivier and others, after those acute or chronic diseases which are called adynamic, have observed marks of inflammation or extravasation on the surface of the spinal marrow, or at the origin of the nerves; and the like has been noticed in petechial malignant fevers. After yellow fever, a good deal of serum has been found in the cavity of the spine.—Ludwig has said, that colic pains which extend to the back, and those which arise from some kinds of hæmorrhoids, scirrhus, and cancer of the rectum, and in difficult menstruation and in pregnancy, proceed from irritation of the spinal marrow. Pains, also, which attend the commencement of some fevers, he attributes to difficulty in the circulation of its vessels. When the viscera of digestion are affected, it is not uncommon to find paraplegiæ, supervening upon dysentery, for instance, and disappearing with the primary affection. Our author has several times produced a fatal tetanus in horses, by injecting into their veins a watery solution of nux vomica (strychnine;) but on dissection, he never found any apparent injury of the spinal marrow; whether the tetanic affection lasted some time, or proved instantly fatal: here, tetanus is certainly not the result of inflammation. The symptoms of both are the same, but the proximate cause altogether different.

The palsy produced by excess of venery, the abuse of spirituous liquors, and similar causes, is often curable. It seems to depend on exhaustion of the nervous centre; and it is in palsies,

which depend on this cause, that nux vomica appears to be of decided benefit. It rouses the spinal marrow from its state of stupor ; but it often occasions violent pain in the palsied limbs, without producing the slightest change in the palsy of motion. This medicine, as yet, has been used only internally ; but our author advocates its employment in the form of friction. The hydrocyanic acid has an opposite effect ; it moderates the excitement of the cerebro-spinal system. It appears to be a sedative, without any of the bad effects of narcotics ; but it is never useful, except when the nervous excitement does not depend on an apparent organic change. Our author here mentions the process by which M. Hufeland makes the distilled water of bitter almonds, which he considers as a useful mode of administering the hydrocyanic acid. In French measure, it is as follows :—

" Bitter almonds, 2℔. ; alcohol, 2oz. ; water, 6℔. We put the almonds, roughly powdered, into a retort with the above-mentioned liquids, and, by distillation, press over 2℔s. into the receiver : 24 drops of this water contain about a drop of hydrocyanic acid. The phial must be corked with emery, and kept in a dark, cool place."

We have thus given an abstract of M. Ollivier's work, which is not unworthy of a place in every physician's library ; not certainly for its elegance of style, or its masterly execution, but on account of the valuable facts and observations which it contains. Many of the cases are compiled from preceding writers, but many of them are new ; and from the care and patience with which they have been drawn up, we think their authors, among the list of whom we rank M. Ollivier, entitled to much praise. It is impossible to do justice to the work in the compass of a few pages ; for to do that, we should have transcribed the whole volume. However, we have tried to select its most interesting parts. The extracts, which we have occasionally interspersed, are given in the author's own words, except in a few instances, where we thought he was rather studying the mode of book-making, than brevity or persuasiveness of style. Yet he is not, in general, a diffuse writer ; and he has committed so few other faults, that we can scarcely venture to criticise him. For many of the diseases he treats of, he has indicated nearly the same mode of cure ; which would argue the inutility of distinguishing, accurately, betwixt the various inflammatory effusions of the spine. But accuracy, however apparently useless, must be always praiseworthy in medicine.

MONTHLY SUMMARY

OF PRACTICAL MEDICINE.

I. ANATOMY AND PHYSIOLOGY.

Dr. Gartner's *Account of an Appendage to the Uterus of some of the Lower Animals.*

Of all the animal functions, none has given rise to so many theories, or caused so many discussions, as the function of generation. Notwithstanding, however, the laborious researches which this portion of the animal economy has occasioned, few parts of physiology are less understood. Theories have succeeded theories; each has had its admirers and defenders, and each has successively sunk into oblivion to give place to the reigning favourite of the day. That the female, as well as the male, secreted a seminal fluid, is a very ancient doctrine, and one which, after having been long and keenly contested, has now fallen into discredit.

Some researches have lately been made into the anatomy of these parts in some of the lower animals, which, if confirmed in the human subject, may contribute to throw some light on this obscure part of the animal system.

Dr. Gartner, an ingenious and zealous anatomist and practitioner in Copenhagen, has lately obtained an honorary medal from the Royal Society of Sciences of that city, for a discovery in the genital parts of the cow and the sow. This discovery was announced in our Journal some time ago; and we then promised to recur to it as soon as we should receive a description on which we could rely. As Dr. Gartner has lately printed an essay on the subject in the Danish language, we shall endeavour, for the benefit of our readers, to compress into a short compass the information which it contains.

The author was engaged in an investigation of the lymphatics on the uterus of the cow, when, by accident, he discovered a canal full of a clear, yellowish fluid. From its appearance, he was convinced that it was neither a blood-vessel nor absorbent; and upon cutting into it, he found that he could inflate it both above and below the opening. Upon further investigation, he found that traces of the canal could be seen to within an inch of the ovary, and that, on following it downwards, it opened beside

the orifice of the urethra. Having experienced some difficulty in fully developing the organ in the cow, he proceeded to search for a similar part in the sow. Here his researches were immediately crowned with success.

"The sow has a double uterus, without any neck, properly so called. That part, however, of the vagina which lies nearest the place where the uterus is divided, has prominences within on the one side, which fit into corresponding depressions on the other, and in this manner shut up the openings into the uterus. The vagina is somewhat long, and has a round figure, though a little flattened on each side. The urethra opens into it about two inches from the external parts of generation."

The organ is much more complicated in the cow, and the author accordingly experienced greater difficulty in developing it. The uterus of the cow is distinguished by a long and thick neck, and two horns that proceed from the body, and terminate in the Fallopian tubes. As far as we have been able to discover from the description before us, assisted by the plates, the organ in the cow consists of three parts.

1. A duct on each side of the vagina, which, beginning by a small orifice near the mouth of the urethra, immediately expands into a *capitulum* or sac, large enough to admit the point of the finger. This part differs altogether in structure from the rest of the canal, for its inner surface is smooth and polished, and its outer is fibrous and somewhat muscular, while the inner surface of the rest of the duct is composed of a mucous membrane, the outer consisting of the common cellular substance. From this part the canal runs on the paries of the vagina next the bladder, and terminates about an inch from the os uteri in a *cul de sac*, which communicates by a valvular or cribriform opening, with the canal that begins at this part.

2. A number of follicles or cysts, on which numerous blood-vessels are ramified. These cells are generally full of a viscid fluid. Sometimes little glandular knobs are found mixed with them, and sometimes hydatids are found adhering. In a cow 16 years old, Dr. Gartner found on one side a canal of a spiral form, and on the other a number of cells, under and among which ran the duct. The cells were nearly as hard as cartilage, and large enough to admit the point of the finger.

3. Under and among the cells, a canal is observed, at first, of a tortuous or spiral form, which, running along the neck of the uterus, follows the curve of its horn, upon which it extends to within an inch of the ovary. This canal in the cow is pervious, from its beginning, to the place where it turns towards the cornu

uteri. It can, however, be traced to within an inch of the ovary.—*Edin. Med. and Surg. Journal.*

Dr. Davy *on the Absorption of Gases by the Animal Tissues.*

Two cases of pneuma-thorax having occurred to Dr. Davy, in one of which the operation of paracentesis was performed with success, he was led to an experimental inquiry on the gases occasionally found in various parts of the human body, and on the power of some of the tissues in absorbing aeriform fluids.

His observations may be considered, in reference to physiology, under two heads : under the first, we shall arrange his researches on the absorption of gases by the different membranes of the body ; under the second, those on the gases disengaged in certain circumstances from the blood.

1. On analyzing the aeriform fluid collected from the chest of the first case of pneumathorax, he was surprised to find, that it did not contain a particle of oxigen, but consisted of azote and carbonic acid only, in the proportion of 92 of the former, and 8 of the latter. These results were singularly confirmed afterwards by the analysis of the air withdrawn in the second case by puncture during life. It consisted of 93 azote, and 7 carbonic acid.

He was therefore naturally led to inquire, whether this gaseous fluid was originally atmospherical air, which had escaped from the bronchi into the sac of the pleura, or a peculiar effusion ; and subsequently, to ascertain the changes which atmospherical air and other gases undergo when introduced into the sound pleura. For these ends he first injected atmospherical into the pleura of a dog, closed the aperture carefully, and killed the animal in forty-eight hours ; when he found, as had been anticipated, a great part of the oxygen gone ; the residual gas being composed of 93 azote, and 7 oxigen, with a trace of carbonic acid. Oxigen gas is evidently absorbed by the pleura much more readily than azote. It appears farther, that carbonic acid gas is absorbed less rapidly than oxigen, but more quickly than azote : A mixture of atmospheric air with a fourth of its volume of carbonic acid, and therefore containing per cent. 20 carbonic acid, 63.2 azote, and 16.8 oxigen, when allowed to remain two days in the pleura of a dog, contained in every hundred parts 18.3 carbonic acid, 78.3 azote, and 3.4 oxigen. Hydrogen gas is absorbed with the same facility as oxigen, if not more rapidly ; and it is a very remarkable fact, that, although no azote exist in

the gas or gases injected, it will be found abundantly in that which remains. Thus, when a mixture of carbonic acid and hydrogen in the proportion of 57.5 of the former, and 42.5 of the latter, was left for two days and five hours in the pleura of a dog, it consisted of 12 per cent. of carbonic acid, 88 of azote, and contained no hydrogen. * * *

These experiments appear to establish, that the gases differ very much in their susceptibility of absorption by the serous membranes. The author has not attempted to discover what law they follow in this respect; nor can we pretend to do it for him, because his experiments are not comparable with each other. With regard to most of the gases, however, it appears, that the susceptibility of being absorbed approaches pretty nearly their relative solubility in water. But there is a striking exception to this rule in the case of hydrogen; and on the whole it will probably turn out, as Dr. Davy hints, that they follow a law peculiar to the vital economy, and not conformable with any of their physical habitudes.

Dr. Davy also renders it probable, that other membranes besides the serous have the property of absorbing the different gases with different degrees of celerity. At least it is certain, that the aeriform contents of the cavities, which are lined by mucous membrane, are almost identical with the gases he found in the serous sac of the pleura. He has likewise found the aeriform fluid of the intestines to consist of carbonic acid and azote; and in the frontal sinuses and maxillary antra of the sheep he found a much larger quantity of carbonic acid, and a much less proportion of oxigen, than exist in atmospherical air.

2. We have now to notice his observations on the gases, which in certain circumstances are disengaged from the blood. This subject he was led to investigate in consequence of observing the singular fact already mentioned, the evolution of azote into the sac of the pleura when hydrogen had been injected into it. He first shows, that the evolved gas could not have proceeded from air believed by some physiologists to exist between the two pleuræ. Was it derived, says he, from the blood as an exhalation or secretion? This question, he thinks, may be answered in the affirmative, because azote is occasionally disengaged by the blood in other situations. Thus, Messrs. Allen and Pepys found that it was sometimes disengaged from the lungs in respiration; and it is a fact singularly analogous with the results of Dr. Davy's experiment (a fact, however, which he seems unaccountably to have overlooked,) that, when another innocuous gas is substituted for the azote which is breathed,—for example, hydrogen,—then azote is disengaged from the lungs

in great abundance. Another situation in which azote is disengaged from the blood is in the cavities of the blood-vessels soon after death. Dr. Davy has been at some pains to show how this evolution of gas cannot be always owing to putrefaction, and, if we do not mistake, he seems to think he has been the first to call in question the capability of such a cause to produce it.—We apprehend, that no pathologist who is worthy of the name, ever now dreams of attributing to the putrefactive process those bubbles of air, which are frequently found soon after death in the heart and great vessels, and more particularly in the vessels of the pia mater; and Dr. Davy will find, that the same opinions he has formed have been stated before by various authors. He is the first, however, so far as we know, who has analyzed and determined the nature of this air.—*Edin. Med. and Surg. Jour.*

II. SURGERY AND MIDWIFERY.

Mr. Callaway's *Case of Priapism.*

On the 17th of March, 1822, I was requested by my neighbour Mr. Ravis, to visit A. B., a healthy, muscular man, aged forty-four, under the following circumstances :—

On Saturday night, the 8th of March, he came home inebriated, and had connexion with his wife three times during the night without its producing the consequent collapse of the penis although emission each time ensued; the penis remaining firmly erect during the following day, Monday and Tuesday. On the Wednesday, when I was called to him, the organ was then erect, and without pain, (except on very firm pressure :) twelve leeches were applied, fomentations of hot water directed, and brisk cathartics used. The hip bath and venesection, *ad deliquium*, were also ordered, but without producing any effect. On the 17th, the priapism was as complete as when the attention of Mr. Ravis was first directed to it; the two corpora cavernosa were distended and extremely firm; the corpus spongiosum was not turgid; and the glans penis was soft and yielding. Finding that local measures had no effect in reducing the tension of these parts, we had recourse to nauseating doses of tartar emetic, and these were continued for two days, with a cold lotion of muriate of ammonia and nitrate of potash to the part, but without the slightest variation supervening. The whole class of narcotics, as conium, hyoscyamus, opium, &c., were ineffectually had recourse to; the tobacco enema was also administered, which, although it produced its full influence in lowering the vital powers,

pulse, &c., had not the slightest effect on the penis : the mercurial ointment, with camphor, was rubbed in twice a day for several days, until ptyalism was induced. Still the penis remained as firm and turgid as before.

On the 24th, being the sixteenth day of the duration of the erection, an opening, with a lancet, was made into the left crus of the penis, below the scrotum, and a large quantity of dark grumous blood, with numerous small coagula, escaped. By pressing the penis, the corpora cavernosa were immediately emptied, and each side became flaccid, the communication by the pecten allowing of the discharge of the contents of both corpora, by the incision into the left crus, without there being a necessity for an opening into each of the crura. For several days the aperture continued to discharge blood mixed with pus into the poultices which were applied to the part, and which was the only after-treatment necessary, as in a few days the man was able to follow his avocations.

I have seen him within the last month : he has remained quite well, but informs me that he is impotent, the organ continuing collapsed, and no erection having been since produced, nor has it been acted on by venereal excitement ; consequently it is not subservient to the purposes of procreation : this is most probably occasioned by a deposition of coagulable lymph in the cells of the corpora cavernosa preventing the admission of blood, and consequent distension of the organ.

It may be remarked, that at no time during the existence of the priapism was there any difficulty in passing the urine.—*Lon. Med. Repository.*

M. Lisfranc *on the Diagnosis of Fractures.*

The experiments which I have made upon the dead body, and afterwards repeated upon the living subject, both in my private practice and at the " Bureau Central," do not permit me to hesitate in laying down the principle, that there can be no more a doubtful fracture, excepting some solutions of continuity of the bones of the cranium. In fact, by the assistance of the stethoscope the tumefaction is never sufficiently considerable to conceal the crepitation, and the slightest movements are sufficient to render it perceptible. Our patients will, therefore, no longer be exposed to those errors, so dangerous in the diagnosis of fractures ; and we shall have the satisfaction of preventing those

violent pains, which are the inevitable consequence of the present mode of investigation.

General Rules for the application of the Stethoscope.

1. When the stethoscope is applied upon a fracture, it is almost indifferent whether the mouth-piece be left in it or not; but in proportion as we recede from it the crepitation becomes more sensible, if the instrument be deprived of the mouth piece.

2. The more superficial the bones are, the more the crepitation is distinct, and as the slightest movements are sufficient to produce it, it is the most sensible upon the fracture. Thus we not only determine the fact of the fracture, but also its precise seat. It would be useless to remark how much we thus avoid those painful examinations, and how important it is in practice to know the precise situation of the solution of continuity in the bone. To discover this situation with accuracy, it is indispensable that the movements impressed upon the fragments should be always the same.

3. The crepitation is less appreciable in proportion as we recede from the fractured point, but it is heard at almost inconceivable distances; in that case, however, it must be rather strong.

4. When a fracture exists with crossing of the part (chevauchement,) the crepitation is less easy to be distinguished; but if an unexercised ear do not perceive it very easily, it may be rendered much more distinct by practising slight extension and counter extension.

5. The crepitation occasioned by fragments of compact bones produces an acute sound, with loud crackling (des forts petillemens,) perceived by the stethoscope they are often loud, and sometimes considerably offend the ear.

6. The crepitation of fragments of spongy bones is obtuse (sourde,) and is similar to the action of a file upon a hard and porous body (the pumice stone for instance,) the noise, from time to time, is intermixed with rather stronger sounds, which have a certain analogy with the crepitation of compact bones.

7. The crepitation of oblique fractures is stronger than that of transverse fractures.

8. If a liquid be effused round the fragments, there is joined to the crepitation a noise, similar to that which the foot produces in a bad shoe containing water.

9. When the fracture is complicated with splinters, there is heard, besides the ordinary crepitation, a sort of crackling, simi-

lar to that which many hard and angular bodies would produce when rubbed against each other.

10. When the fracture is accompanied by wounds of the soft parts, to the crepitation are joined sounds similar to those produced by strong inspirations and expirations, when the mouth is widely open.

11. Luxations cannot be confounded with fractures, for the sensation produced by the displaced articular surfaces is slight, and hardly extends beyond the situation of displacement: it is obtuse, like that of two polished and humid surfaces moved upon each other.

12. The movement of tendons in their sheaths produces sounds, full, obtuse, jerking, rather thin (rares,) and extremely different from crepitation.

We shall not terminate these generalities without recommending even to those who are accustomed to the use of the stethoscope, to occasionally exercise themselves to the sound of crepitation upon the dead body; for if we judge by ourselves, and MM. Ricard, Zieglar, Michel, Van Mons, Accarie, and Gosteat, who have assisted us in our researches, our first essays furnished us but very obscure sensations.

Fractures of the Tibia.—The pathologists agree that fractures of the tibia are often very difficult to appreciate, particularly when the patient has been able to walk; the pain, which continues beyond the usual time, the impalement which takes place upon some joint of the bone, the shocks which the patient experiences during sleep, are but equivocal signs; often the tumefaction prevents the osseous inequalities from being discovered, which indeed sometimes do not exist at all. The same may be said of the mobility of the fragments; if the crepitation takes place it is obscure, particularly to ordinary practitioners. Let the stethoscope be applied, and impress the slightest movements upon the fragments, and every difficulty disappears. Crepitation, although but little sensible at the posterior part of the leg, is heard along the whole length of the thigh, on the crista iliaca, on the sacrum, and half up the spine; but it is more distinct as we approach the fractured part. If the instrument be placed upon the point of the fibula, diametrically opposed to the fracture, the noise of the crepitation is less than in the whole extent of the tibia, it is less by one half than upon the fracture itself.

Fractures of the Fibula.—Inferior third. When the tumefaction is considerable, the luxation of the foot within is the only sign which allows us to presume the fracture of the fibula; I say presume, since even though after the reduction, the foot should enjoy a great mobility, and should be dislocated spontaneously,

one would not have the proof of the existence of a fracture, since the rupture of the ligaments might permit of this extraordinary mobility, and yet nothing is more common than to see a simple luxation of the foot reproduce itself spontaneously. If it be objected that it is perfectly indifferent to establish the diagnostic of a fracture, during tumefaction, we would reply, 1. That in pathology it is best to determine a disease upon the spot. 2. That the inflammatory and œdematous swelling disappears by reduction. At all events, it will be admitted that it is extremely rare to obtain a crepitation in the present case. If slight pressure be exercised along the course of the fragments, and recourse is had to the stethoscope, the crepitation is extremely distinct upon the seat of the fracture, it is less upon the middle part of the bone than upon its head, because of the presence of the muscles, which cover the body of the fibula ; for the same reason, it is more appreciable upon the crista iliaca than upon the thigh. When the instrument is applied upon the point of the tibia, corresponding to the fracture of the fibula, a distant crepitation is heard, and when it is placed upon the tibia, higher or lower than the fracture of the fibula, a very obscure sensation is obtained.

Middle Part.—At this height the fracture is more difficult to distinguish, since the bone is more deeply seated and the displacement is less ; after having advised the impression of movements on the fragments, authors add, that a mistake may be committed : it may be always avoided by the stethoscope ; the crepitation will be better appreciated upon the fracture than upon the head of the fibula, or upon the head of the external malleolus.

Fractures of the Leg.—Sensations from multiplied surfaces rubbing against each other, sound equally sensible within and without the leg, and are perceived, very distinctly, as high as the middle of the vertebral column, but diminishing in proportion as we recede from the fracture. It is evident, after the facts we have just established, that the fracture of the fibula may be easily distinguished from that of the tibia, and the fracture of the leg from that of each of these bones in particular.

Longitudinal Fracture of the Patella.—This is so difficult to determine, that authors have almost omitted to mention its signs. The slight separation of fragments, of which Lamotte speaks, is impossible to distinguish if there be any tumefaction. It is also very difficult to impress movements sufficient to appreciate the crepitation and unusual movement of the parts of a broken bone—all these researches are also dangerous, from the development of inflammation which might occur. The stetho-

scope removes, in an instant, all doubt; the slightest movements suffice to produce a sensation of creeping (fourmillement,) most sensible on the fractured part, and perceptible, after the rules established, up to the crista iliaca.

Transverse and Oblique Fracture of the Patella.—1. A prudent surgeon will never permit the patient to walk in order to determine this fracture, for it would produce the serious inconvenience of tearing the aponeurotic and fibrous layer, if it had resisted the fracturing cause, or the action of the muscles.—2. The commemorative signs can never serve as the basis of a sure diagnosis.—3. We proscribe, from the above reasons, all movement or flexion of the wounded leg.—4. When the swelling of the soft parts exists, the interval established between the fragments is no longer perceptible, although it be considerable.—5. To hear or feel the crepitation, much pain would be occasioned, the bones would be moved considerably, which not only would renew the inflammation, but fresh tearing would be produced.—By the stethoscope all these dangers will be avoided; the slightest motion produces, distinctly, the ordinary crepitation of spongy bones. The limb ought always to be placed in a state of extension, and when there is a considerable separation of the fractured portions, their contiguity ought to be effected.—Do not let us omit to say, that in fractures of the patella, there is joined to the crepitation the sensation produced by the rubbing together of articular surfaces.

Fractures of the Femur.—For the most part, this accident is easily distinguishable; but to determine it by the ordinary means, much more pain is occasioned than by employing the cylinder. Applied upon the fracture, it is always better heard there than elsewhere. It is sensible in the whole extent of the limb, upon the crista iliaca, upon the abdomen, upon the spine, and even upon the sinciput; it may be perceived upon the thorax, while to the sound of respiration are added, deep, obtuse, distant sounds, similar to those heard at a distance from a deep cavern.

Fractures of the Neck of the Femur.—In a great number of cases the diagnosis of this fracture is so difficult to establish, that, although we have the luminous description of it by MM. Boyer and Richerand, there is no disease, I believe, which has so often occasioned mistakes. The shortening of the limb, indeed, and the ascent of the great trochanter do not always exist, or are so slight as to be very difficult to determine. To arrive at the diagnosis more easily, we have long since advised the admeasurement of the respective lengths of the lower extremities by a string, which should extend from the anterior su-

perior spinous process of the ilium to the external malleolus.—There are subjects in whom the member has become elongated by imprudent measures, then the oblique fragments form an arch (arc boutent) against each other, or the paralysed muscles allow themselves to be distended, again opening a new source of errors ; for, in the first case, it may become very difficult to give to the thigh its ordinary length, or to produce its shortening.—The rotation of the foot without is not constant. (*Pare, J. L. Petit, & Desault.*) The power of rendering to the limb its usual length and rectitude, by slight efforts of extension, is a sign which does not always exist.—The small extent of the circle described by the trochanter major, requires extremely painful movements of rotation, and the trifling length of the neck of the femur may easily impose upon us. The impossibility of bending the thigh upon the pelvis, when the leg is extended, is a symptom which may also produce the contusion of the articulation.—In the Memoirs of the Academy of Surgery the history of a case is given, in which the patient arose and walked to his lodging after the neck of the femur had been fractured. MM. Desault and Laennec have made similar observations. A great number of facts, collected by Louis, Duverney, and Sabatier, prove that the displacement of the fragments does not always take place immediately after the accident. It is not, therefore, surprizing that the greatest surgeons often hesitate in giving their opinion, even after having observed the case during several days. Every doubt vanishes on the application of the instrument invented by M. Laennec. If the slightest movement be given to the limb, the crepitation is perceived ; it is as distinct upon the anterior part of the crista iliaca as upon the articulation itself : it is heard remarkably upon the patella, and in the whole length of the leg.—The separation of the epiphysis from the head of the femur, and the depression of the cotyloid cavity, observed by Ludwig, ought to furnish a particular sound ; I have no datum upon these facts, but merely mention them to excite the attention of practitioners.

Fractures of the Pelvis.—I have long since observed, that the most certain means of discovering fractures of the pelvis is, by introducing the finger into the rectum or vagina ; nevertheless, some of these fractures are very doubtful. Whenever the fragments have a slight mobility, the stethoscope will discover the solution of continuity and its seat.

Fractures of the Radius.—This fracture is not difficult to distinguish at some distance from the wrist ; nevertheless, to determine it satisfactorily, it is often necessary to give multiplied. painful, and even dangerous movements to the bone. When.

however, it occurs very near the inferior extremity of the radius, it is agreed that its diagnostic is obscure; it becomes more so from the slight projection occasioned by the superior portion of the broken bone upon the dorsal or palmar surface of the fore-arm; the solution of continuity of the bone may then be confounded with the luxation of the wrist, for the pain often prevents the movements of the hand, and even should they be executed, the swelling would render them incomplete, and would not permit us easily to perceive if the styloid process was moveable or not.—The stethoscope has here, also, the advantage of determining the slightest crepitation; it is most sensible upon the fractured spot. If the cylinder be placed upon the ulna, directly opposite to the fractured point of the radius, the sound is less than on any part of the radius. The crepitation may be heard upon the humerus. If the radius only be moved, when fractured, the crepitation is heard; but if, afterwards, the ulna alone be thrown into action, supposing no fracture of it, no crepitation is heard. This rule applies to the tibia and fibula: nothing, therefore, is easier than to determine a fracture of one of these bones.

Fractures of the Fore-arm.—The stethoscope will here again preserve the patient from the violent pains which the ordinary means of investigation often occasion. The crepitation is most distinct upon the fractured place; as distinct on the outer as the inner side of the member; it may be heard as high as the superior part of the sternum, even upon the head. Like the leg, the crepitation occasions the sensation of multiplied surfaces rubbing against each other. The fracture of the fore-arm is easier to distinguish than that of the radius or ulna, separately.—*Anderson's Quarterly Journal.*

III. PATHOLOGY AND THERAPEUTICS.

Mr. Thompson's *Case of Dumbness.*

The instances are numerous where speech has been restored through the intervention of manual or medical means, and they have ceased to excite the interest which at first was felt at their recital; but the spontaneous efforts of Nature in producing such effects are so rare, that they deserve recording. Nature operates slowly in remedying her errors; and art, therefore, is often exercised in order to effect what might have been accomplished without such help. The subjoined case is one, however, which art had nothing to do in the cure of; it was effected,

and in a manner successfully, entirely by Nature alone, and is another instance of the restoration of speech after a lapse of some years. It possesses originality from the change taking place without any previous shock or any apparent alteration in the state of health, which, in most of the cases to which I might refer, was particularly remarked. There is reason to believe, also, that the organs of speech were affected simultaneously with those of hearing. The deprivation of hearing produces dumbness in most instances, but it is seldom that the organs of sound are affected at the same time with those that receive it. The more common way is for one set to be in a natural or healthy condition, while the other remain in an unfit state to exercise its functions. Where there is a defect in both, experience has shewn that the prospect of a cure is very distant; and the records of acoustic surgery present us with very few instances of natural restoration. I therefore present the following history:—

Betsy Page, now in her twentieth year, was, when in her eighteenth month, seized with convulsions, which, for three weeks, occasionally attacked her, and then left her altogether. It was observed, shortly after their disappearance, that she had lost her speech, and likewise hearing; but her vivacity remained the same, and the health not in the slightest affected. Prior to this seizure, she is said to have been remarkably quick in catching any little word, and repeating it with great distinctness; but all the art that was resorted to could not afterwards make her articulate the least intelligible sound. In this state she continued till her sixteenth year, when it was observed that the tones, as her mother said, became more human, and she began to utter sounds like words. After this she added, though slowly, to her little stock, two or three words every week; they were monosyllables only. Words of any length could not, at this time, be taught her; and she continued to make very little progress till the beginning of June last, since which time she has greatly improved.

She gave her mother to understand, the first time she had ever been able to hear any thing was after a rejoicing on a public occasion. At the time, the sound made by the cannon gave some pain on one side only; this was on the left: on the right she could hear nothing, and felt no sensation similar to the other. This ear still remains deaf; she has since inquired if all persons hear but in one ear.

She has always displayed great quickness. When at school she surpassed most of the scholars in needle and fancy work; and the mistress with whom she was taught informed me, no trouble was experienced in teaching her. With this lady she

continued a length of time. Her drawings shew much taste and execution for the time spent in learning. She has been from school three or four years. During the last six months she has been attending to reading at home, and can with trifling assistance distinctly pronounce, and in part understand, words of one and two syllables. The progress made has been proportionate to the exertions used and the instruction given, neither of which have been great. A few lessons also in arithmetic were at one time given, but being unused to abstract reasoning, and unable to draw conclusions, more difficulty was experienced in this branch of knowledge than in any other yet attempted, and I suspect it has been given up in disgust. But of numbers she has some idea ; although their complex combinations appear to be beyond her reach, she enumerates to a considerable extent on being asked. It is not a little strange, that although she has been in the habit of repeating her prayers morning and evening to her mother for a length of time, she is still unable to say them from memory. I found, on questioning her, that she could not connect five words of the Lord's prayer without they were distinctly given, and of their meaning she could comprehend but little. The words used in endeavours made in the way of explanation, always confuse her, however simple, especially from a stranger, the sound of the voice being different from that to which she is accustomed : this may account for the difficulty found in making her understand. What has been gained, too, with respect to language, has been gained at home—rather an unfit place for rapid improvement. The greater ease found in communicating by signs make those about her resort to them, and, therefore, she is likely to be a long time before she will be able to converse fluently ; but the progress made during the last nine months gives an " earnest of success" which ought not to be lost sight of ; and, in consequence, I strongly recommended a removal amongst strangers. The voice, also, which is now harsh and grating, would, of necessity, be improved, from the more constant use to which it would be put.

Her memory is defective in those things received by impressions through the medium of the ear, but not so in those received through the other senses, as the sight, &c. ; any thing once observed is remembered for ever. Although she can copy a letter with the greatest exactness, and some neatness, her defective recollection prevents her putting together three words in a connected form. The brain, like any other part of the body, becomes weak from want of use, and may be by length of time totally deprived of power.—*Lond. Med. Repository.*

Dr. Carter's *Cases of Epilepsy.*

It will probably be recollected by the readers of the Repository that, in April, 1823, a case of epilepsy was laid before them, in which the tartar emetic ointment seemed to have had the effect of suspending the disease for many months. The patient, Turner, has not to this day been struck off the hospital books, and he has attended occasionally there to report the state of his health. When his case was published, I entertained some hope that the paralytic affection of his arm might be removed; but I am sorry to say it remains much in the same state. In the course of last summer he had several returns of hysteric laughter, which distressed him exceedingly, but he had no fits, and was now and then able to assist in a garden near his cottage.—He complained that the pain and soreness of the arm to which the ointment was used impeded him in the little work he was able to do; and, as he had continued exempt from any attack for so long a period, I was disposed to prove what would be the result of allowing the sore to heal. It was accordingly healed, and for some time the man remained tolerably well. November 6th, however, he complained of pain and giddiness of head, and constipation. Twelve ounces of blood were taken from the temporal artery, a dose of oleum terebinth. was given, and a saline mixture was ordered.

He was relieved at the moment, but he again applied on the 16th, having had a strong fit that morning. Upon questioning him, it was discovered that he had also had a fit previously to the 6th, but had concealed the circumstance, fearing that the ointment would be resumed. It now was resumed, he had leeches to his temples, and the pills with croton oil were directed to be taken as formerly. From the day that the patient began rubbing in the ointment up to the present date, March 1st, he has had but one fit, and that occurred before any effect had been produced by the remedy.

In Turner's case, then, the ointment has been decidedly of great service; and it affords me much pleasure to find, by the report of my colleague Dr. Chisholm, that it has succeeded in his practice also.

I have a case now under my care of epilepsy of twelve years' standing. A drain has been kept up for upwards of three months by means of the ointment, and the patient has had no fit, though, just before she came to the hospital, the attacks were at much shorter intervals. As, however, she has formerly been free from them for above a twelvemonth at a time, nothing conclusive can

be drawn from her present immunity from them. In a future report I shall offer a faithful history of this case.

We can hardly expect uniform success from this remedy; and I think it fair to state, that in more than one instance it has failed, in common with every other.

James Twyman, aged sixteen, became out-patient August 29th. He had been subject to epileptic fits since the preceding Easter, and it was stated that they recurred regularly at the new and full moon. The young man was of sanguine temperament; there was evidence of great fulness about the head; his countenance was flushed, eyes heavy, and there was general dulness of manner. His pulse was full, and rather hard. Tongue white. Bowels rather costive. Blisters were applied behind his ears, and a discharge maintained by an ointment containing a small proportion of tartar emetic. He took every other morning inf. gent. c., inf. sennæ, aa ʒvj., magnes. sulph. ʒiij. He returned home for a fortnight; and when I saw him again, September 12th, I learned that he had had a fit just before the new moon. He was now admitted into the hospital. The same medicines were continued; and three or four days previously to the moon being at full, twelve ounces of blood were taken from the temporal artery. He had no attack. He was again bled just before the new moon, and escaped a fit. The bleeding was, I think, repeated three or four days before he quitted the hospital, which he did on the 17th, without experiencing any symptom of a return of his disease. He was charged, in the event of his being again attacked, to apply for readmission, but I have heard nothing of him since he was discharged.—*Lon. Med. Rep.*

Dr. Carter's *Case of Rheumatism.*

Elizabeth Blythin, aged twenty-five, was admitted May 16th, with acute rheumatism, which had entirely deprived her of the use of her limbs, and complaining also of considerable uneasiness about the region of the liver, which it seemed, from the patient's statement, had subsisted for some time previous to the rheumatic attack. There was some tenderness upon pressure; pain of right shoulder; countenance sallow. My attention being directed chiefly to the more prominent affection, a mixture was ordered, containing vinum colchici. This produced distressing vomiting of bilious matter, and I was obliged to substitute for it the saline effervescing mixture, with a few drops of laudanum. A pill, containing five grains of calomel and one of opium, was taken at bed-time, and a dose of Epsom salts on the following

morning. The motions produced by the purgatives were very dark. The saline mixture was continued till the 22d, and the sickness gradually subsided. The inflammation of the joints was as severe as ever. Sixteen ounces of blood were now taken from the arm; a saline draught, with twenty minims of colch. wine, and five of tinct. opii, was prescribed thrice a day, and a scruple of pulv. ipec. c. at bed-time. The blood was cupped and buffy, but its abstraction afforded little relief.

On the 24th, the patient remaining nearly as before, ℿlx. of vinum colch. with ℿx. of tinct. opii, were given for three successive nights, with some alleviation of the pain; but it was not sufficiently marked or permanent to give much encouragement to either the patient or the Physician. During the whole of this time the hepatic affection had continued to be very troublesome, and, though the bowels were freely moved, the evacuations were invariably dark.

On the 27th, cal. gr. vi., opii, gr. jss., were ordered every night, and the former medicines were omitted. The calomel and opium were persisted in till the mouth became very sore. The tenderness and pain of right side had by that time receded almost entirely; the alvine discharge had become more natural; and the rheumatic affection was less. Vinum colch. with pulv. ipec. c. at night, and a saline mixture, with tinct. digitalis, every four hours, completed the cure of the latter. The patient remained in the hospital several weeks, taking tonic medicines and warm laxatives for the re-establishment of her general health. She was discharged July 21st, better, as she said, than she had been even some time before the attack of acute rheumatism.

I have recorded the foregoing case, because, as it has afforded myself a lesson, so I hope it may be useful to my younger brethren of the Profession. In Elizabeth Blythin acute rheumatism had been preceded by inflammation of liver, and it was combined with the latter in a chronic form when she was admitted into the hospital. Instead, therefore, of beginning with colchicum and Dover's powder, should such a case again occur to me, I should bleed in the first instance. I should apply leeches to the region of the liver, and afterwards, perhaps, a blister; and I should then give calomel and opium till the mouth became sore. Under such a mode of treatment, I should expect not only that the affection of the liver would be lessened, if not removed, but that the rheumatism would also be relieved: but, should the latter still maintain its ground, the way would, at least, be cleared for the exhibition of medicines more particularly calculated to subdue it. Such is my view of the practice which I ought to

have pursued. Had I pursued it, I think the patient would have been cured *citius jucundiusque.—Lon. Med. Rep.*

IV. MATERIA MEDICA AND PHARMACY.

Mr. Blackett *on Fumigation.*

In a late paper which I had the honour to transmit to the Repository, I engaged myself to furnish the result of my further experience of the efficacy of fumigations in several diseases. In fulfilment of that promise, I now forward some additional observations on that remedy ; at the same time, being well aware that much more remains to be said on a subject so comprehensive and interesting as it is, and which, in this country, has been little attended to, and, consequently, is but little known.

Case I. *Cutaneous Disease.*—Mr. J. G., enjoying a tolerable state of health in other respects, had been afflicted, for the last seven years, with disease of the skin, partaking of the nature of psoriasis ; it was a source of the greatest inconvenience to him, particularly when warm from exercise, or when in bed. The itching at those times was next to insufferable. On leaving bed in the morning, the sheets would usually contain as much scaly desquamation as would fill a plate. The disease was much aggravated in the spring of the year, and still more so in the autumn ; at those times it put on the appearance of impetigo, attended with a discharge from the sore or abraded cuticle. Exertion or flexure of the body frequently occasioned the skin to crack into long fissures, giving rise to a profuse ichorous discharge ; which, if not carefully absorbed with soft rags, was followed with excoriation wherever it was allowed to remain.

It was a little after the autumnal aggravation of symtoms, and when in the state above described, that, by my advice, he tried the sulphurous fumigations every other day. The impetigonous character and soreness was rapidly subdued ; the scales, at the same time, detaching themselves in abundance, and new ones forming, but of a thinner description, until they altogether ceased to be generated. The skin remained preternaturally red for some time ; but this gradually wore off. The whole of the surface of his body is now perfectly soft, natural, and perspirable, which it had never used to be. His complexion, from being of a muddy colour, has become clear, and his cheeks florid. He took, in the whole, twenty-seven baths, conjointly with the following internal remedy :—

R Sulphuris Præcip. ʒss.
Potassæ Supertartar. ʒj.
Pulv. Jalapii, ʒss.
Misce bene, et distribue in chartulas xviij. Capiat unam bis in die ex melle.

In addition to this powder, at the suggestion of Mr. Green, he took half a pint of tar water twice a day.

It would be an irksome task to enumerate the variety of medicines that this gentleman had taken for the removal of his disease; and many of them were persevered in for a long time, but without any apparent good effect. He had likewise spent several months at Bath and Harrowgate, but without any permanent benefit: the waters of the latter place, however, seemed to have been of rather more service to him than those of the former.

Case II. *Syphilitic Ulcers.*—Mr. T. W., a strong healthy man, had been annoyed for upwards of six years with extensive ulcerations in various parts of the body, in consequence of syphilis. These ulcers occupied the scalp, the spine, and legs. Those on the scalp and spine would sometimes, in consequence of the applications externally used, and the remedies taken, remain healed for a month or six weeks at a time; they would then suddenly break out and extend to a considerable size, always putting on the honey-comb character and a dark copper colour. Generally the healing process would begin from the centre, but would not advance regularly, it suddenly becoming, after two or three days, arrested, and the ulceration assuming as bad an appearance as before.

This gentleman had been salivated three different times, without manifest advantage, notwithstanding it was generally when he was in a state of ptyalism that the ulcers put on their most favourable appearance; the medicine, however, was then obliged to be discontinued, in consequence of the great weakness it occasioned, and its running off through the bowels. Various remedies and applications had been tried, under the direction of some of the most intelligent Practitioners, but the disease resisted all efforts. Under the foregoing circumstances, I advised a trial of the fumigating baths, but not with much confidence of the benefit that would follow. My satisfaction was not little on seeing the amendment that took place after the fourth bath. He took in all eleven in the period of a month. The ulcers on the legs and spine cicatrized completely during their use; but, from causes unnecessary to be detailed, he was under the necessity of discontinuing them, there remaining still some ulcerations on the scalp, which, however, during the three weeks after discontinu-

ing the baths, became firmly healed like the legs and spine, and assumed a healthy appearance.

The first few baths occasioned considerable pain in the ulcerated parts whilst submitted to the action of the sulphurous acid gas: this smarting pain gradually became less until it altogether ceased; the ulcers then regularly and progressively got well.—At the end of three months the parts have not shewn the least disposition to relapse.

Case III.—I have now a gentleman, aged twenty, using the baths, for scabies of the purulent kind. It has existed since the age of between nine and ten, occupying particularly the flexures of the joints, the insteps, hams, fossæ of the nates, bends of the elbows; and more or less extending over the whole body, excepting only the palms of the hands and the soles of the feet.—He has taken a great variety of remedies, and used as many external applications, but without permanent benefit. He has now employed a bath daily, for the last three weeks, with such progressive improvement, as to lead me to expect his perfect cure. In conjunction with this remedy, he at first took Plummer's pill, but it was afterwards changed for small doses of arsenical solution.

Case IV.—A lady, about forty years of age, whose digestive organs had been for some years in a deranged state, complained of flatulent distention of the stomach and intestines, occasional spasms, and colicky pains, followed by sickness and acrid eructations. Her habit of body had been always constipated, arising, as it was supposed, from a torpid state, and some partial indurations of the liver: and she had frequently suffered from attacks of erysipelas in the face and about the ears. She was much reduced in muscular strength. She had been taking, for a long time, the different preparations of mercury, in various forms, and with other remedies. When she applied to me, the submaxillary and parotid glands, on one side, were so much swollen, as to occasion pain and difficulty in swallowing; and the sterno-cleido-mastoideus muscle was much enlarged and painful, so as to cause the patient to carry her head on one side. She attributed these swellings to a severe cold she took at Brighton last winter, whilst under the influence of mercury. For this lady's complaints I directed tonic remedies, with an aperient at night; and as the skin was in a harsh dry state, as an adjunct, I ordered her every other day to use a sulphurous fumigating bath. It gave me great satisfaction to find, that, at the expiration of a week, my patient expressed herself better. At the end of three weeks,

the swellings had disappeared, and she could move her head without pain ; her general health was much improved ; the skin had become soft and natural. She now discontinued the baths, but took daily an acidulated decoction of bark, until she considered herself quite well. It is now more than two months since she left off all medicines, excepting an occasional aperient. She has since had some slight colds, but no erysipelas or return of the swellings.

Case V.—M. B., aged forty-five, a man of robust constitution, had been teized with a dry scabies : the itching was exceedingly troublesome to him, particularly when he was near the fire or in bed ; his general health was indifferent. The disease occupied the hams, but more particularly the hands and arms. In the hands, the fissures were many, and some of them very deep. He took one dram of the lac sulphuris twice a day, mixed with sugar, and used twelve of the fumigating baths, by which means the cutaneous complaint was completely removed.

Case VI.—J. W., a lady upwards of seventy years of age, had been greatly distressed, for the last four months, with *prurigo senilis :* the itching was at times intolerable to her, and, from scratching, the surface of her legs was abraded, swollen and inflamed, and oozed a watery discharge. This patient's skin was in a dry shrivelled state, from age and the nature of the complaint. I immediately recommended to her the adoption of sulphurous fumigation, which, after a time, removed the disease.—*Lond. Med. Rep.*

MEDICAL LITERATURE OF THE

UNITED STATES.

Medical Recorder. VOL. VII. NO. III.

Art. I. *An Essay on Epidemic Fevers.* By John E. Cooke, M. D. of Frederick County, Virginia.

The proprietor of the Medical Recorder offered a premium of one hundred dollars, for the best Essay on the Epidemic fevers of our country. The premium was awarded to Dr. Cooke, of Frederick County, Virginia, and the essay is creditable, not only to the author, but to the proprietor of the Journal, in which

it has been published. The paper is chiefly devoted to the autumnal fevers of Virginia, and to the epidemic, which has occurred in various parts of the United States, during several of our late winters. It is an abstract, and we are disposed to term it a faithful abstract, of the opinions and practice which Dr. Cooke has deduced from his own experience, and from the writings of several eminent physicians.

ART. II. *An Essay on Fractures of the Lower Limbs.* Communicated by the author, J. AMESBURY, Esq. M. R. C. S. of Great Surrey-street, Blackfriars, London.

An essay on fractures, by Mr. Amesbury has already been published in the Monthly Journal. This is said to contain the author's more recent experience.

ART. III. *Case of Tumour in the Scrotum.* By ISAAC HIESTER, M. D. Reading, Penn.

"There is a disease of the scrotum occasionally met with in surgical practice, which I do not recollect to have seen described by authors. It consists in one or more moveable tumours, resembling the testes in consistency; and sometimes so much in size, also, as to have been occasionally mistaken by patients, for supernumerary glands of this kind." These tumours are of more frequent occurrence, than is generally imagined, but as they generally produce no inconvenience, the surgeon is not often called upon to examine or treat them. Excision is the best remedy whenever the tumour becomes large and painful, and that course was successfully adopted by Dr. Heister, in the present case.

ART. IV. *Case of Extra-uterine Gestation.* By JOHN J. MOORMAN, M. D. of Pattonsburg, Virginia.

In a case of extra-uterine pregnancy it was deemed prudent to palliate the symptoms, and support the patient's strength. She died however in about ten days after Dr. Moorman visited her, and about four years from the first appearance of pregnancy.—On opening the abdomen the physician "discovered the tumour, covered by the omentum, situated just beneath the great arch of the colon, and extending below to the fundus of the bladder, inclining rather to the left side, with most of the small intestines on the right; adhering firmly to the *right broad ligament and right fallopian tube*, the thickened and extended coat of which enclosed it as a cyst. The left broad ligament, fallopian tube, and both the round ligaments, as well as the ovaries, were free from adhesions." In the superior portion of this tumour were found the

rudiments of a fœtus. "The head, thorax, and abdomen, were plainly made out, but we could not distinguish the extremities, or any of the viscera with absolute certainty. The cavities of the cranium and abdomen, were filled with a watery fluid resembling the washings of flesh. The thorax contained grumous blood."

ART. V. *Case of Enlarged Tongue, cured by a Surgical operation.* By DR. H. S. NEWMAN, Warren county, Penn.

"On the 27th of September, 1822, Dr. Newman was called to visit Charles Osborn, aged five years, whose tongue was enlarged. Its length as it hung out of his mouth, measured from the apex to the teeth, 2 1-2 inches; its circumference at the largest place, 7 1-2; and where it was encircled by the teeth, 5 1-2. Its papillæ were broad, flat, scabrous, and of a dark brown colour. The incisores, canine, and first molars on the left side, were broad and flat; these, together with their alveolar processes, took a direction forwards and downwards, and by their projection, completely confined the lower lip. The lower jaw was slightly curved downwards, produced by the weight and bulk of the tongue, and by the long continued opening of the mouth, very little motion could be effected, the articulation of the condyles being almost immoveable. A constant and perpetual dribbling of saliva, descended from the point of the tongue, which kept his apparel constantly wet, from his chin to his feet. The saliva was slightly offensive; yet, notwithstanding this circumstance, and the increased secretion, no disease could be discovered in the salivary glands. He could neither articulate, nor masticate; subsisting chiefly on milk, and save a slight indisposition in the last stage of pertussis, was in good health."

The tongue was amputated, and in a few months the boy was able to taste, eat and articulate.

ART. VI. *An Account of a case of Schirrous Uterus, in which the Cervix Uteri was removed by an operation.* By H. G. JAMESON, M. D. Surgeon to the Baltimore Hospital.

In this paper Dr. Jameson has related the manner, in which the excision of the neck of the uterus was accomplished, and the difficulties which attended the operation. The patient died on the 8th day. Those who would prepare themselves to practice this formidable operation will consult Dr. Jameson's paper.

REVIEWS.

ART. VII. *Dublin Hospital Reports.* VOL. III.

ART. VIII. *A Case of unusually large Aneurism of the right Axillary Artery, in which the Subclavian Artery was tied.* By CHARLES H. TODD, Esq.

ART. IX. *Transactions of the Surgeon Apothecaries. Vol.* I.

The preceding papers, being selected from the Medico-Chirurgical review, have been principally republished in the former numbers of the Monthly Journal.

ART. X. *The New-England Journal of Medicine and Surgery.*

ART. XI. *The Philadelphia Journal of the Medical and Physical Sciences.*

ART. XII. *Observations on the Pathology of Scrofulous Diseases, with a View to their Prevention.* By W. P. ALISON, M. D.

Dr. Alison is of opinion that too much attention has been given to the circumstances of hereditary contamination and the influence of climate, and too little to the amount of effect produced by other circumstances. The agency of cold in producing disease is not by any means striking in those most exposed to it, but in those whose constitutions are in such a state as to favour its operation. Thus, persons in the country, exposed to all the vicissitudes of the weather, as they have robuster frames, so they suffer less than the debilitated inhabitants of large towns. He calculates that cold is "intimately concerned in the production of fully two-thirds of the deaths among the lower orders, in a great town in this climate." The application of these remarks is made as follows :

"Now, what is true of the production of disease in general by exposure to cold, seems to be true of the production of scrofulous diseases in particular; but with these limitations : 1. That scrofulous action appears to be excited almost solely in the earlier periods of life ; 2. That to the production of this kind of diseased action, there appears to be required, besides other conditions, a certain peculiarity of habit, not understood, but manifestly hereditary ; and 3. That the constitutional debility, which disposes to scrofulous disease from cold, appears to be more permanent and habitual than that which disposes to the other diseases resulting from this cause.

"The term disease of debility is much too vague for scientific discussion. It is easy to see that it is not every one who is weakened, even permanently, that becomes thereby disposed to take on scrofulous disease, nor every one who possesses considerable bodily strength that escapes ; but if it appear, on careful

inquiry, that, of a given number of persons, previously weakened by other causes, a much larger proportion becomes affected with some form of scrofula, than of an equal number not so weakened, but otherwise similarly circumstanced, we are entitled to conclude that, in many cases, the scrofulous tendency depends in part on, or is much increased by, a state of general debility: and it is probably only in so far as it depends on this cause that it is remediable."

MEDICAL INTELLIGENCE.

Sulphate of Quinine.

"We understand that the College of Apothecaries have examined into the adulteration of the sulphate of quinine, mentioned in our last number, and contemplate taking measures to prevent, by their influence, the recurrence of these dangerous frauds. The practice of poisoning the waters of a country to destroy an enemy during invasion, is considered as cruel and contrary to the customs of civilization; how much more so must be the individual, who, to gain a little money, betrays the unsuspecting physician, and seriously injures or destroys the helpless sick.—In Delaware, some years ago, a whole neighbourhood was poisoned by litharge administered in bark; the physician fled.—These evils, if not met by the law, will be by the good sense of the people. Accordingly, in one of the western states an empirical practitioner has lately been expelled from a village in a summary way. He was conducted by a general rising of the medical men to the suburbs, and banished. If such a proceeding were attended by the respectable men of the community, its influence must be decided. Indeed, the miserable beings, who thus practice on the lives of their fellow men, should be regarded as objects of commisseration, and any peaceable and lawful mode of rescuing them from their evil practices should be regarded as a favour done to themselves and to society. The principles on which medicines are administered consist of a series of elaborate intellectual processes, which apply the various agents of the mineral and vegetable kingdoms to the successive and changing periods and types of diseases. To apply one remedy as a cure for all diseases, or the same remedy to the varying types of one disease, will often endanger life. The medicines of empirics, on this account, soon lose their character, and continually give way to the power of the regular practitioner, who, like the skilful navigator in a storm, alters his plans, and judiciously varies his course, with the numberless accidents which are continually rising around him."

ACADEMY OF NATURTL SCIENCES.

"A society under the title of the Academy of Natural Sciences has for some time been established in this city. It promises to be highly useful; geology, mineralogy, chemistry, botany, and natural history are its objects. Its results to the science of our country promise to be great. Mr. Le Sueur, a distinguished naturalist from France, Charles Bonaparte, Ord, Say, Nuttal, Worth, contribute papers on natural history. Harlan, Horner, on anatomy; the former also on antediluvian remains, the track of the great Cuvier. Troost, Seybert, Vanuxem, make contributions on chemistry. Mr. Maclure, its worthy president, has given several papers on geology, which have attracted notice.—This is one of the most celebrated societies of North America. Its papers are edited by Messieurs Say, Hays, Lea, Griffith, and Keatting."

The Calysaya Bark, (Calisaya Arrollenda,) is beginning to attract attention as a remedy for intermittents. Mr. Carpenter, an ingenious chemist, states that double the usual quantity of the sulphate of quinine can be obtained from it."

New-York Monthly Chronicle of Medicine and Surgery.

We have received the first number of a Medical Journal under the above title.

ART. I. *Observations on the Misrepresentations of British Writers in relation to American Medicine.*

"We cannot," say the editors of the London Medical and Physical Journal, "at this moment, call to mind any one leading principle in physiology or pathology, any one acknowledged improvement in surgery, or any one remedy of general efficacy, proposed by an American practitioner."

We have always considered the above sentence a disgrace to the man who penned it, and not to the men of whom it was written.

It is an acknowledgment on his part of ignorance, or forgetfulness, of which no respectable physician in this country would be guilty, and we deem it reasonable to infer from this very extract, that the American practitioners are more enlightened, and better informed than the sage editors of the London Medical and Physical Journal.

ART. II. *Observations on the Small-pox and Chicken-pox, with some remarks on the true value of Vaccination as a preservative against the Small-pox.*

"The following conclusions appear to us to be warranted by facts, and we believe are admitted by all writers upon the subject.

1. That vaccination possesses a controlling influence over the small-pox, so great as to have entirely eradicated it from some countries.

2. That this influence does not, in all cases, extend so far as to furnish a perfect immunity against the attack of the small-pox.

3. That it modifies the disease so far as to deprive it of danger."

REVIEW.

ART. III. *Essays on various Subjects of Medical Science.* By DAVID HOSACK, M. D. F. R. S. L. & E. &c. &c.

ART. IV. *A short Treatise on Operative Surgery.* By CHARLES AVERILL, M. D.

ART. V. *New-York Medical and Physical Journal.*

INTELLIGENCE.